LIBRARY
A. & M. COLLEGE OF TEXAS

CALIFORNIA

OIL WORLD

TWICE MONTHLY • SECOND ISSUE • OCTOBER 1949

COVERING • New Mexico—California—Wyoming—Montana—Colorado—Idaho—Utah • Western Canada

don't make a monkey out of your derrickman

No matter what kind of a job is being , the derrickman and the crew get going faster work better with BJ Elevators. Superior rch and engineering skills have added "ease perating features" that men in the field now nd as standard requirements.

BJ ELEVATORS

Whether you specify the famous BJ "Alphabet" Type Elevators (side door or center latch), Slip Casing Elevators, or other more specialized BJ Elevator types—your derrickman will make faster, smoother round trips with the balanced, easy-operating advantages offered by BJ Elevator design. Engineered with a four to one safety factor. Fewer parts. Constructed for the toughest jobs — handling today's heavy equipment at high speeds

. . . But for the best recommendation, ask the Derrickmen who use them!

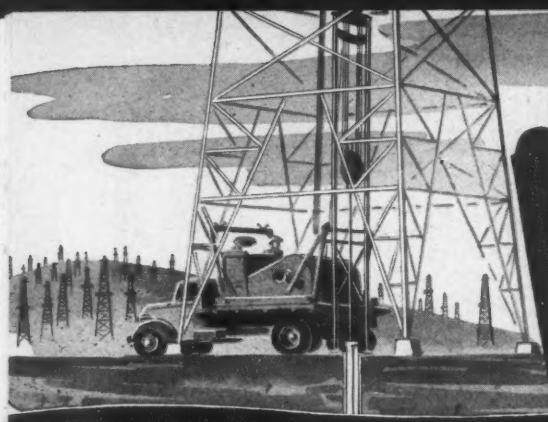
For complete information on the Industry's most complete line of Elevators, write for the latest BJ Elevator Bulletin. Or refer to your BJ Catalog where complete information is carried.

Byron Jackson Co.

Since 1872

MAIN OFFICE AND PLANT: LOS ANGELES 54, CALIF.

Mid-Continent Office and Plant, Houston 1, Texas
Export Office, New York 17, New York
Stocking Jobbers All Principal Oil Fields

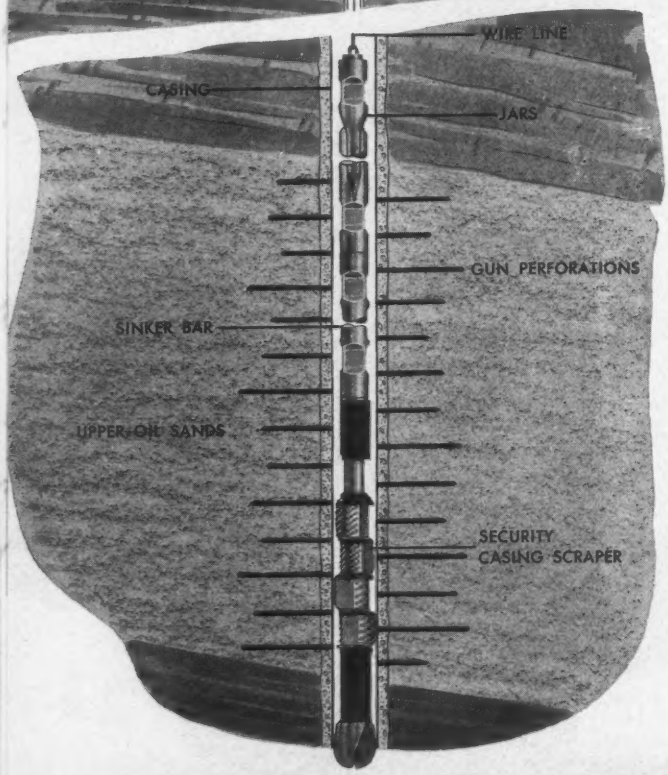


LOCATION: *Signal Hill*

WELL HISTORY: *Depleted production required recompletion at upper pay zone. Gun perforated at 10,000 feet opposite new pay.*

PROBLEM: *Economically scrape casing perforations without rotary equipment.*

How would you Scrape Casing Without a Rotary?

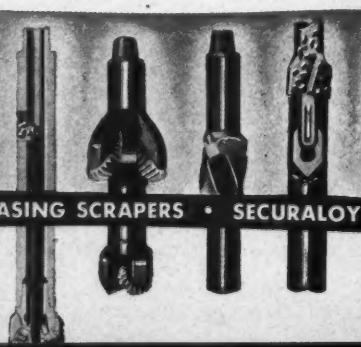


The production superintendent of a large oil company was faced with the problem of scraping 7" casing which had been gun perforated with 150 holes at a depth of 10,000 feet. The only work-over equipment on the job was a small pulling unit backed up to the standard derrick.

The only way he could solve the problem, without moving in rotary equipment, was to run a Security Casing Scraper on wire line. He ran a 7" Security Scraper on ⅝" wire line with a sinker bar above the Scraper and a set of jars above the sinker bar. The scraper was run up and down through the gun perforated section. Only three hours were consumed in this operation, including running in and out of the hole. Packers were run through the scraped section and set without difficulty.

This is a typical example of how the Security Casing Scraper can reduce your work-over costs because it is the only Scraper which does a complete job when run on drill pipe, tubing or wire line. Call your Security Field Representative when you are ready for your next scraping job.

Security



ROCK BITS • CORING BITS • HOLE OPENERS • REAMERS • CASING SCRAPERS • SECURALOY

SECURITY ENGINEERING CO., INC.

ONE OF THE DRESSER INDUSTRIES

Main Office and Plant: Whittier, Calif. Branches in all of the major producing ar[illegible]s.

CALIFORNIA
OIL WORLD

PUBLISHED TWICE A MONTH
FOR TIMELY, COMPLETE
OIL NEWS COVERAGE

PETROLEUM PUBLISHERS, INC.
MEMBER AUDIT BUREAU OF CIRCULATIONS
W. C. MONROE—President and Editor
LARRY O. MILLER, Advertising Manager

706 SO. VALENCIA ST.
LOS ANGELES 14, CALIFORNIA
KINZIE MILLER—Vice President
FRED JONES, Chicago Manager
228 No. La Salle St., Chicago 1, Ill.

SECOND ISSUE
• OCTOBER, 1949
VOL. 42 • NO. 20
WHOLE NO. 1786

California Oil World is published twice a month at 706 So. Valencia St., Los Angeles 14, California. Entered as Second-Class Matter, April 29th, 1944, at the post office at Los Angeles, California, under the Act of March 3, 1879. Subscription price $1 per year in U. S. and possession, $2 in foreign countries, including Canada. Member of the Audit Bureau of Circulations.

October 31st, 1949
Telephone DUnkirk 2-6218

Washington Highlights

Gasoline can be made from coal to sell for only three or four cents a gallon more than natural gasoline, according to the U. S. Bureau of Mines. The estimate was contained in a report prepared by the Bureau's coal to oil demonstration plant at Louisiana, Missouri. James Boyd, Bureau Director, announced the report demonstrated that "unlimited quantities of premium gasoline could be produced from coal at a cost that would increase its current service station price to the consumer by only three to four cents a gallon. Through the sale of by-products phenols, for which demand may be limited, a few initial plants could produce gasoline at even lower cost." On the subject of gasoline, the American Petroleum Institute has pointed out that this motor fuel, without taxes, is now more than five cents a gallon cheaper than it was 30 years ago. When gasoline was untaxed in 1918, the average cost was 25.12 cents a gallon. The API said the 1948 average cost of gasoline, without taxes, was 19.54 cents a gallon. By the addition of an average tax of 6.34 cents a gallon, the total average 1948 price to consumers was boosted to 25.88 cents. This compared with an average of 23.11 cents a gallon in 1947, including an average tax of 6.18 cents. The API report showed that "since 1923 the price index for petroleum products has constantly remained lower than the indices reflecting all commodities, all fuel and lighting, including petroleum, coal electricity and gas, all foods, building materials and all textile products."

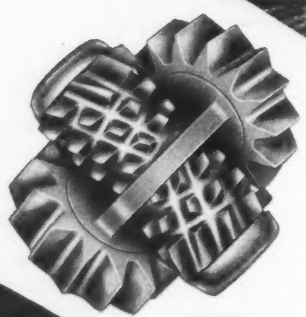
The part played by American flag tankers in Marshall Plan petroleum shipments from the United States averaged 54 per cent in the six-month period from April through September. Under the European Recovery Act, no less than 50 per cent of U.S. financed goods originating in this country are required to be carried by American flag vessels. U. S. tankers during the 12-month period from April 1948 to the same month of the current year hauled 25.6 per cent or 16,000,000 tons of petroleum. This petroleum was purchased both here and abroad and United States financed.

The Supreme Court refused to dismiss two suits by which the Federal Government seeks to establish its paramount right to oil-bearing tidal lands off the coasts of Texas and Louisiana. The court last May 16 gave the Justice Department permission to sue the two states and at the same time asked the states to file answers to the claims of the Government. Texas and Louisiana response was a request to the court to throw out the suits. They said the Constitution does not give the high court the necessary authority to decide a controversy between the United States and a state. While refusing to dismiss the suits, the court gave Texas and Louisiana 30 days additional time in which to file answers to the action of the Government. Commenting on the tidelands dispute, Senator Downey, Democrat of California, recently stated that offshore lands controversy has narrowed down to the issue of whether the Federal Government can administer oil development better than the coastal states. Downey is a member of the Senate Interior and Insular Affairs Committee which is studying legislation on ownership rights. "I am not convinced that the Federal Government can manage it better," said the California Senator. "Secretary of the Interior Krug admitted to the committee that the matter of revenue is relatively unimportant to the Federal administration. That means that the issue has narrowed down to whether or not the interests of national defense and economy will be better served by Federal administration." Ernie Pyles of Long Beach, a California petroleum industry leader, told a Senate Interior subcommittee that unless the Government recognizes leases granted by California there is a possibility of a complete shutdown of wells operating along the state's so-called tidelands.

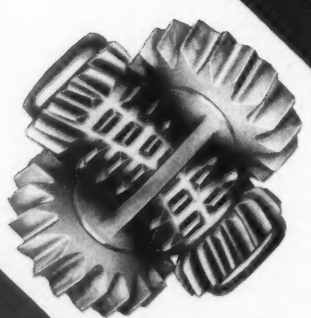
Two American business and financial experts have left for Japan to assist Allied occupation commander Douglas MacArthur. The Defense Department announced that the experts are Joseph M. Dodge and Harold F. Sheets. Sheets is a retired industrialist from Santa Barbara, California.

Teeth are important on Rock Bits, too!

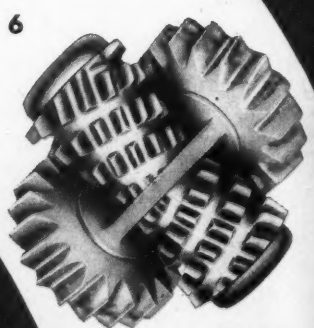
K-2



DDT



6



E-2E

There are 11 types of H. C. Smith Rock Bits — each with specially designed teeth to drill specific formations.

You get *FASTER, STRAIGHTER, FULL GAUGE HOLE* by choosing the H.C. Smith Rock Bit with the right tooth design for the formation encountered.

H C Smith

OIL TOOL CO.

GENERAL OFFICES AND PLANT:
P.O. BOX 431, COMPTON, CALIF.

The Effects Of Natural Gasoline On Motor Gasoline Qualities

By G. R. MacPherson and F. Sipos
California Research Corporation
Richmond, California

Fall Meeting

Introduction

The performance of a motor gasoline in an automobile is dependent upon many factors. Among these are the type and condition of the particular engine, the weather, and the driver, as well as the properties of the fuel. The petroleum refiner is responsible for controlling the properties of the fuel. By careful tailoring of the gasoline he controls the antiknock properties, the freedom from gum and corrosion tendencies of the gasoline and markedly influences the vapor locking tendency, ease of starting, warm-up time, acceleration and crankcase dilution characteristics. Many of these qualities are taken for granted by the consumer but each requires careful control during the refining step.

Motor fuel properties such as vapor locking tendency, ease of starting, warm-up time, acceleration and crankcase dilution characteristics, are related to the equilibrium distillation breakdown of the fuel and have been correlated with inspections such as vapor pressure, and ASTM D-86 10 per cent, 50 per cent, and 90 per cent evaporated boiling points. Vapor locking may be encountered in hot weather if the vapor pressure is high and the 10 per cent is low. However, if the vapor pressure is low and the 10 per cent point high, starting may be difficult in cold weather. Warm-up time may be excessive if the 50 per cent and 90 per cent points are high. During the warm-up period the acceleration will be sluggish. Crankcase dilution also may become a problem if the 90 per cent point is high. Hence, from a service and performance viewpoint, it is desirable and necessary to limit the vapor pressure and distillation 10 per cent, 50 per cent and 90 per cent points to obtain a gasoline having optimum volatility characteristics for a reasonably wide range of climatic conditions. The optimum volatility limits will be different for different seasons of the year and for different geographical locations.

The refiner's problem of producing a balanced gasoline by simultaneously meeting all four of the above volatility controls as well as specified knock ratings, sulfur content, and stability is frequently quite complex. Base stocks must be cut at the correct end point. A certain amount of reprocessing must be done. This may include rectification of base gasolines, reforming of heavy straight run gasolines, polymerization of butenes, or alkylation of isobutane with light olefins such as butenes, adequate treatment of base stocks for sulfur reduction, odor correction, and/or

FIG. 1

VOLATILITY OF SOME TYPICAL REFINERY STOCKS

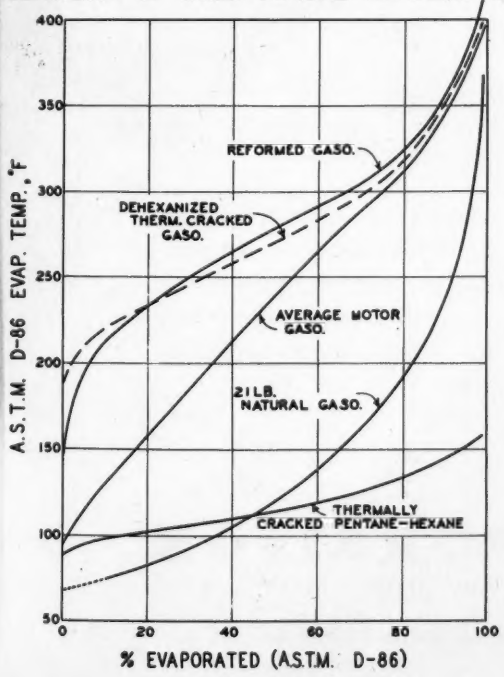
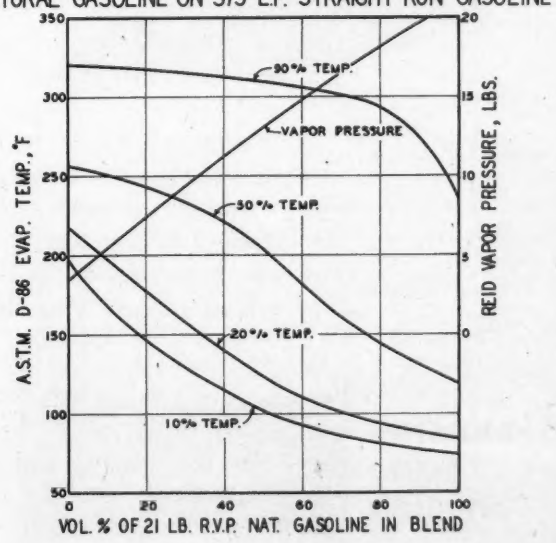


FIG. 2

EFFECT OF 21 LB. REID VAPOR PRESSURE NATURAL GASOLINE ON 375° E.P. STRAIGHT RUN GASOLINE



Standard of California's **MUSHRUSH NO. 5**

WORLD'S DEEPEST PRODUCING WELL

BROUGHT IN AT 15,530 FEET

used

THE value of oil emulsion drilling fluids is rapidly becoming recognized as an invaluable aid in deep oil well drilling. For a comparatively low cost the operator lessens the possibility of stuck pipe and expensive fishing jobs; provides a more accurate hole caliper; less torque; a thin, tough, pliable filter cake; better lubricating values and ideal electric logs. Macco Lube Seal embodies *all* of these advantages. Write for complete information.

DRILLING FLUID DIVISION

MACCO CORPORATION

Main Office and Plant: 14409 South Paramount Blvd., Paramount, California

Branch Plants: Bakersfield, Rosamond, Huron, Rio Vista, Ventura

gum and color stability. Natural gasoline and butane are also available for use in obtaining balanced volatility. However, as will be discussed later, there are certain limits on their use which are imposed by service and performance requirements.

Refinery Volatility Balance

For simplicity, we shall limit the refiner's problem to the production of gasoline of balanced volatility. The following means are available to him for its control:

1. Use of natural gasoline may be varied.
2. The vapor pressure of the natural gasoline may be varied.
3. The depth of cut or end point taken on straight run, reformed and cracked gasolines may be altered.
4. The amount and degree of reprocessing such as the amount and severity of thermal reforming or the amount of butanes rejected in rectification of base stocks may be changed.

For flexibility in blending or other reasons, a refiner sometimes divides certain of the base gasolines into two cuts. This does not "control" the overall volatility of the gasolines marketed, but may be used to distribute volatility between two or more grades.

As an aid in understanding the concept of volatility balancing, consider the gasolines shown in Figure 1. Here are plotted the ASTM D-86 distillations of some typical refinery base stocks, a 21 pound natural gasoline, and a balanced motor gasoline. Stocks such as thermally cracked pentane-hexane and natural gasoline boil at lower temperatures at all points on the distillation curve than does the motor gasoline. Likewise, the dehexanized cracked gasoline and debutanized reformed gasoline boil at higher temperatures than does the motor gasoline. The former are said to be more volatile or lighter and the latter less volatile or heavier than motor gasoline. If light and heavy stocks are blended together the resulting stock is intermediate in boiling range between the two. The first part of the distillation curve will look somewhat like the lighter stock and the latter part will look somewhat like the heavier component. Thus motor gasoline is the result of blending a number of light and heavy gasolines together in a predetermined manner to obtain a balanced gasoline.

Effect of Added Natural Gasoline Upon Volatility

Because natural gasoline is a light gasoline, blends with heavy gasolines are of substantially lower 10 per cent and 50 per cent points than the heavy base stock to which the natural gasoline is added. This is illustrated in Figures 2, 3, 4, and 5. Figure 2 shows the effect of 21 pound natural gasoline on a 375°F. E. P. straight run gasoline and Figure 3 shows the effect of 13 pound natural on the same base gasoline. Figures 4 and 5 show the effect of these natural gasolines on a 390°F. E.P. cracked gasoline.

Although added natural gasoline markedly lowers the 10 per cent temperature of both base gasolines, it is a good deal more effective with the straight run than with the cracked. This is true in this case because the cracked gasoline is much more volatile (i.e., has lower 10 and 20 per cent temperatures) than the straight run and its 10 per cent and 20 per cent points are much closer to those of the natural gasoline.

The use of a higher vapor pressure natural gasoline lowers the 10 per cent and 20 per cent boiling points more and increases the vapor pressure of the blend more than does the use of the same percentage of low vapor pressure natural gasoline. Fortunately, the 10 per cent point and vapor pressure are sufficiently closely related so that these two specifications for motor gasoline usually can be met simultan-

FIG. 3

EFFECT OF 13 LB. REID VAPOR PRESSURE
NATURAL GASOLINE ON 375° E.P. STRAIGHT RUN GASOLINE

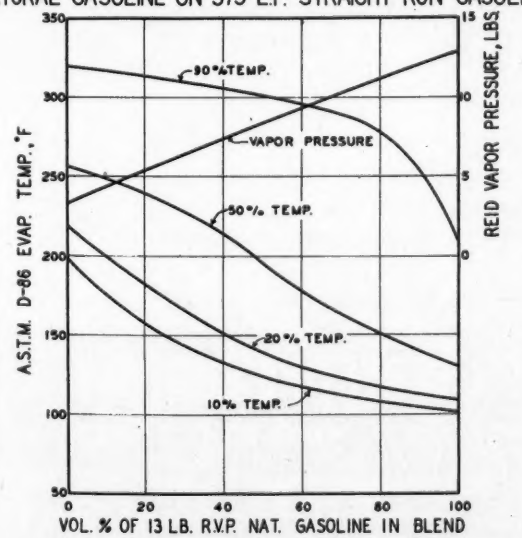
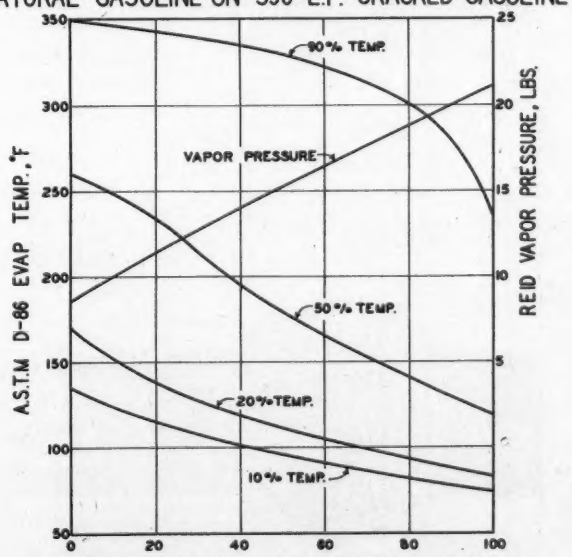


FIG. 4

EFFECT OF 21 LB. REID VAPOR PRESSURE
NATURAL GASOLINE ON 390° E.P. CRACKED GASOLINE



Half Section of Surwel Multishot Surveying Instrument

ACCURATE SURVEYS

Before Reconditioning

PAY DIVIDENDS

With current heavy demand for crude oil and high prices, now is the time to rework those old wells for increased profits! And the first step in such a program should be the accurate determination of well inclination and bottom-hole position by a complete survey.

This can be done quickly and economically with Surwel (Gyroscopic) Multishot Surveying Service which is widely used to survey both new and old, cased or open holes.

The patented Surwel Surveying Instrument provides permanent photographic records of the inclination and direction of the hole at any depth.

It is self contained, operates automatically at pre-set short time intervals both going in and coming out of the hole. Records are obtained by camera which photographs the direction of the gyroscopic indicator and the degree of inclination. The correct course of the well can be plotted from this information and the customer is furnished with the sustaining data.

A complete survey unit with trained operators is ready to serve your needs.

WRITE, WIRE OR TELEPHONE OUR NEAREST SERVICE POINT FOR COMPLETE INFORMATION

★SURWEL SERVICE ★SYFO CLINOGRAPH ★E-C INCLINOMETER ★NON-MAGNETIC DRILL COLLAR

SPERRY-SUN WELL SURVEYING COMPANY

3118 BLODGETT AVENUE HOUSTON, TEXAS

Philadelphia, Pa. Falfurrias, Texas Odessa, Texas Marshall, Texas Long Beach, Calif. Oklahoma City, Okla. Lafayette, La. Bakersfield, Calif. Moulden Oil Field Services, Casper, Wyo.

eously when a selected vapor pressure natural gasoline is added to a base stock. An exception may occur if appreciable propane is present in the final blend. In such cases it may be impossible to produce a gasoline of low enough vapor pressure and simultaneously meet the ASTM D-86 boiling point specifications.

The effect of added natural gasoline on the 50 per cent boiling point of the straight run gasoline in Figures 2 and 3 is appreciably less than the effect on the 10 per cent and 20 per cent points; however, the effect on the 50 per cent point of the cracked gasoline in Figures 4 and 5 is slightly greater than the effect on the 10 and 20 per cent points and is appreciably greater than the effect on the 50 per cent point of the straight run gasoline. This suggests that the slope of the ASTM distillation curve of the base stock influences the 50 per cent point of the blend since the base stock with the steepest distillation curve is affected the most by added natural gasoline.

Inspection of the distillation curve for 21 pound natural gasoline shown in Figure 1 shows that about 80 per cent of the natural gasoline is distilled at a vapor temperature of 200°F. For practical purposes it can be said that substantially all of the natural gasoline distills below the 50 per cent point of motor gasoline blends. Hence, to a high degree the 50 per cent point of a blend is dependent on the distillation curve of the base stock, particularly the front end. If the front end is high boiling as in the case of the straight run base gasoline shown in Figures 2 and 3, the effect of added natural gasoline on the 50 per cent point is less than if it is low boiling like the cracked gasoline shown in Figures 4 and 5.

A concept that is in harmony with the above discussion is that the base gasoline is diluted by addition of natural gasoline and that the upper end of the distillation curve of the blend is approximately that of the base stock appropriately displaced towards the higher percentages distilled. This is illustrated in Figures 6 and 7 where 25 per cent blends of 21 pound natural gasoline are shown plotted with the distillations of the base stocks appropriately superimposed. Here the 50 per cent point of the base stock is equivalent to the 62.5 per cent point of the blend and the 33 per cent point approaches the 50 per cent point, etc. The relationship under this concept is good at the higher boiling points of a blend but, as would be expected, does not hold for the portion of the distillation curve below about 200 °F.

It should also be noted that the high vapor pressure natural gasoline is slightly less effective in lowering the 50 per cent and 90 per cent evaporated boiling points of the blend than is the low vapor pressure natural gasoline. This effect is explained by the fact that in the D-86 distillation all the different types of hydrocarbons present in the charge are in equilibrium with each other at each point in the distillation. A higher concentration of butane in the front end of the distillation tends to carry out a larger part of the pentanes, hexanes, and heptanes in the early part of the distillation leaving a smaller amount to distill off with the octanes, nonanes and heavier hydrocarbon types. Since the equilibrium is shifted by the higher concentration or butane, the material coming off at the higher percentages has a slightly higher boiling point.

Volatility Balancing with Natural Gasoline

If natural gasoline is used in balancing volatility, the 90 per cent boiling point of the motor gasoline

FIG. 5

EFFECT OF 13 LB. REID VAPOR PRESSURE NATURAL GASOLINE ON 390° E.P. CRACKED GASOLINE

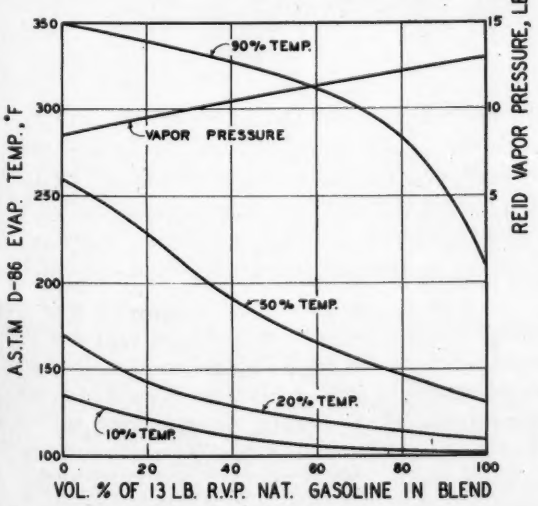
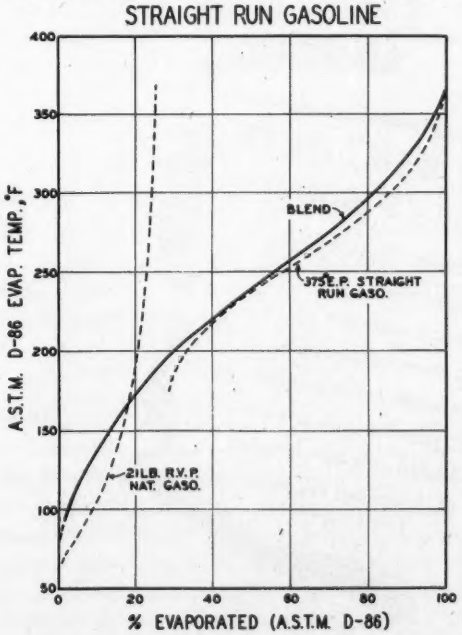


FIG. 6

BLEND CONTAINING 25% OF 21 LB. REID VAPOR PRESSURE NATURAL GASOLINE AND 75% OF 375° END POINT STRAIGHT RUN GASOLINE



The new HEVYWATE CHAMP of California...

OB HEVYWATE "weighing in" specifications:

MATERIAL: Imported Barytes
COLOR: White
SPECIFIC GRAVITY: 4.26—4.41
WATER SOLUBLES: None
GROUND: 99% through 325 mesh
FLOTATION: None (pure ground ore)
WEIGHT: 100 lbs. net, sacked
WAREHOUSES: Ventura, Bakersfield, Compton

OB HEVYWATE is the undisputed champion weighting material for drilling muds. It is pure ground barytes imported from Mexico with an average analysis of 4.26 plus, specific gravity. Several samples of OB Hevywate have assayed as high as 4.41. (The specific gravity of absolutely pure barytes is 4.5). Since OB Hevywate has a minimum of foreign matter and no water solubles, it cannot and will not adversely affect any drilling mud to which it is added.

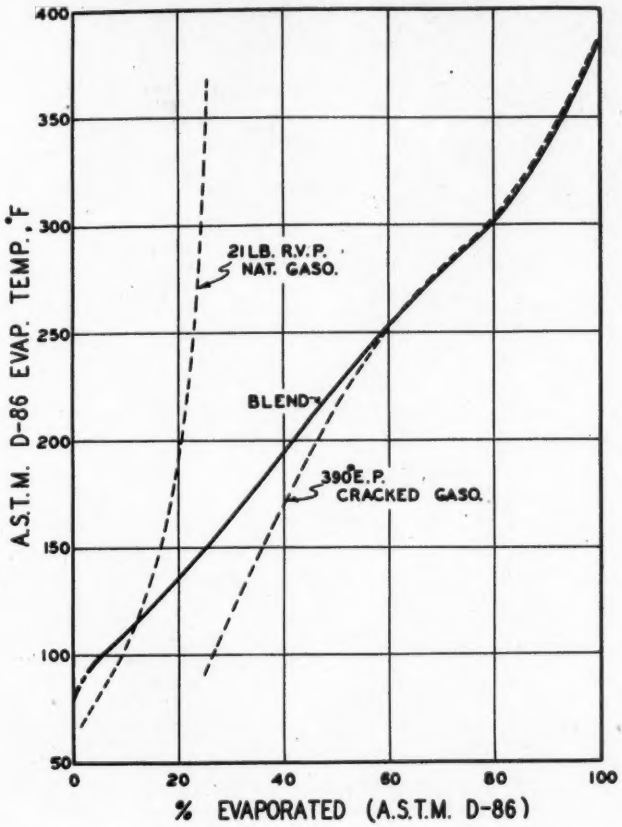
OB Hevywate is ground 99% through 325 mesh—with no flotation. It is sacked 100 lbs. net and warehoused at Bakersfield, Ventura and Compton for quick delivery. And most important—it costs no more than competitive weight materials. Compare the Specifications and price of OB Hevywate with any commercial barytes on the market and you'll agree it's the best buy in weighting material in California. For complete details write or call

OIL BASE, INC.

130 Oris St., Compton — NEvada 6-2532
1821 Evans St., Ventura — Miller 3-6750
1604 King St., Bakersfield — Phone 2-3306
or Mobile Operator ZM-76352
Other offices in Houston, Oklahoma City, Mexico City, Caracas.

FIG. 7

BLEND CONTAINING 25% OF 21 LB. REID VAPOR PRESSURE NATURAL GASOLINE AND 75% OF 390° END POINT CRACKED GASOLINE



is principally controlled by proper choice of base gasoline used. Due allowance is made for the effect that added natural gasoline or other light stocks will have on the 90 per cent point of the final gasoline blend. After addition of light refinery base stocks to the heavy base stocks, natural gasoline of a predetermined vapor pressure is added until the final blend is of the desired 50 per cent point. If the vapor pressure of the natural gasoline used has been properly chosen, the final blend will be within the desired 10 per cent point and vapor pressure limits as well as the desired 50 per cent, and 90 per cent points.

If the volatility specifications are closely met by the blend, then the proper amount of natural gasoline has been used. Increased use of natural gasoline and butane in this blend would impair the performance characteristics of the fuel. Further addition of natural gasoline or butane would increase the vapor pressure and lower the 10 per cent and 50 per cent points. The vapor locking tendency of the fuel would be increased. If a natural gasoline of lower vapor pressure were used a slightly larger volume could be included without increasing the vapor locking tendency. The 50 per cent point would be lowered but this would not be serious from a performance point of view. In order to increase substantially the amount of natural gasoline and still meet the vapor pressure, 10 per cent and 50 per cent requirements, it would be necessary to increase the 90 per cent point of the base gasoline and consequently that of the blend. This could not be done without impairing the warm-up, acceleration and crankcase dilution characteristics of the fuel.

It is usually possible for a refiner to manufacture a motor gasoline of entirely acceptable volatility without the use of any natural gasoline. With complete freedom in the amount of natural gasoline he chooses to use, however, he can in general reach exactly the desired values in all points on the distillation curve.

Effect of Natural Gasoline on Knock Characteristics and Sulfur Content of Motor Gasoline

Although the refiner uses gasoline primarily for volatility control, he finds it has other important properties. Most natural gasolines are of intermediate octane number, of low sulfur content and of high lead susceptibility. The sensitivity, or difference between Research octane number (F-1) and Motor Method octane number (F-2), is low.

The octane number of high vapor pressure natural gasolines is relatively high. The octane number of San Joaquin natural gasolines of about 24 pounds Reid vapor pressure ranges from about 79 to about 81 F-2 clear as shown in Table I. The octane number of the corresponding butane-free natural gasoline is lower, being between 70 and 75. The F-1 octane number of natural gasoline is generally about 1 to 1½ numbers higher than the F-2 rating. This difference between the two ratings, called sensitivity, is about the same as for the corresponding straight run gasolines and is lower than for cracked and reformed gasolines which may range from 4 to 13 numbers in sensitivity.

The sulfur content of natural gasoline is generally low and the lead susceptibility is usually good. The lead susceptibility of motor fuels, therefore, is usually improved, directionally at least, by the use of low sulfur natural gasoline.

For comparison with the California natural gasolines a high sulfur West Texas natural gasoline is also shown in Table I. This gasoline, due partly to its high sulfur content, has a lower octane number than either of the other two shown and has a poorer response to added tetraethyl lead. Much of the sulfur in this gasoline is in the form of sulfides and mercaptans. If these are removed, the desulfurized stock is of higher clear octane number and

To get top wear, rope should be oiled now and then with a suitable lubricant. Here Columbia's Tiger Brand Field Specialist discusses one method...just one of many of his services to users.

How to stop wire rope trouble—before it starts

Making rope perform best and last longest is a job for a Tiger Brand Field Specialist...a job he'll be glad to do for you. He'll make a complete check of your equipment and its working conditions...help you get the one right rope for your job. Tough American Tiger Brand is one rope that's carefully controlled from raw ore on through to the finish. It dotes on rugged work. But to make sure you get all the stamina that's been engineered into Tiger Brand, we offer you the services of a Field Specialist. No charge or obligation, of course. Just contact your distributor or write Columbia Steel Company, Room 1422, Russ Building, San Francisco 4, California.

Columbia Steel Company

San Francisco · Los Angeles · Portland · Seattle · Salt Lake City

Tiger Brand Tip: During its carefully-controlled fabrication, Tiger Brand is lubricated internally. But time and conditions make re-lubing necessary. Paint it on, as shown. Drip it on as rope bends over a sheave. Or apply it in any other way best suited to your installation.

USS **U·S·S TIGER BRAND Wire Rope**

UNITED STATES STEEL

TABLE I
BREAKDOWNS OF TYPICAL NATURAL GASOLINES

Source Designation of Type	San Joaquin Valley California								West Texas			
	Low Octane No.				High Octane No.				High Sulfur			
	Field Sample	Butane Free	Isopentane Free	n-Pentane Free	Field Sample	Butane Free	Isopentane Free	n-Pentane Free	Field Sample	Butane Free	Isopentane Free	n-Pentane Free
Rectification Yield	100	70.0	55.8	43.5	100	67.0	55.8	44.3	100	79.3	62.8	43.2
Gravity, °API	82.0	71.8	65.9	61.2	80.3	68.8	63.9	59.2	84.9	77.6	74.5	67.8
Reid Vapor Pressure, psi	23.6, 23.3	8.9, 8.5	6.1, 5.7	3.4, 2.9	24.1, 23.9	8.2, 8.1	5.1, 4.9	3.3, 3.3	21.8, 21.5	10.5, 10.5	7.7, 7.5	4.0, 3.9
Sulfur, Wt. %	0.0013	0.0023	0.0027	0.0031	0.0034	0.0049	0.0042	0.0048	0.11	0.14	0.19	0.22
F-2 Octane No.*—Clear	79.0	70.6	66.5	65.6	81.2	74.7	73.1	72.5	75.7	67.2	61.9	60.7
+ 1.0 ml TEL	89.1	82.4	77.9	76.5	89.0	85.5	83.6	82.2	80.8	73.8	68.3	65.6
+ 2.0 ml TEL	92.0	85.8	82.5	81.0	.....	.....	.....	.....	83.8	76.6	71.4	69.9
+ 3.0 ml TEL	95.4	88.5	84.7	84.0	95.5	89.9	88.5	88.3	85.7	79.7	74.2	72.5
Fractional Analysis Liq. Vol. %												
Propane	.00	.00	.00	.00	.00	.00	.00	.00	1.69	.00	.00	.00
Isobutane	4.30	.00	.00	.00	6.49	.00	.00	.00	2.55	.00	.00	.00
n-Butane	26.46	.62	.00	.00	26.85	.49	.00	.00	16.42	.00	.00	.00
Isopentane	13.45	18.90	1.46	.00	10.83	16.20	1.14	.00	16.55	20.85	1.54	.00
n-Pentane	10.73	16.20	17.74	.62	10.58	15.80	17.75	.09	19.30	24.30	29.16	1.92
Hexanes	21.59	30.70	38.50	45.30	19.40	28.91	34.81	41.55	23.79	30.00	37.90	52.53
Bottoms	23.56	33.58	42.30	54.08	25.85	38.60	46.30	58.36	19.70	24.85	31.40	45.55
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
ASTM D-86 Dist.												
Initial Boiling Point	73	102	112	156	70	104	120	161	75	102	115	153
10% Recovered	88	124	142	174	89	129	148	175	88	116	134	165
20% Recovered	101	129	148	178	106	136	155	180	97	121	140	169
50% Recovered	157	153	174	193	177	179	180	196	132	138	158	181
70% Recovered	210	188	200	212	232	203	203	216	173	168	182	199
90% Recovered		239	252	262		248	251	258		219	230	242
95% Recovered		272	288	300			282	286		251	264	275
End Point	337	344	356	375	320	329	338	357	308	319	329	346
% Recovered	84	99	98	98	78-½	98	98	98	90	98	98	98
% Loss	15	½	1	1	20	1	1	1	9	1	1	1

* Motor Method.

its response to lead is equivalent to that of a low sulfur California natural gasoline.

Special Uses of Natural Gasoline

The refiner may use natural gasoline in the manufacture of the new wide-boiling-range jet fuel (ANF-58-A). Natural gasoline can be used to control volatility of jet fuel in the same manner as it is used to control volatility of motor fuel.

Natural gasoline is sometimes used in aviation gasoline manufacture. It can be used either as a base stock or to increase vapor pressure. If used as a base stock it must be rectified essentially butane free in order that a reasonable percentage can be included in the blend without exceeding the vapor pressure specification of seven pounds Reid. This base stock is usually of slightly lower octane number than straight run gasoline of the same 50 per cent point from the same crude source; hence, it is used primarily in the lower octane grades of aviation gasoline.

If it is desired to increase the vapor pressure of an aviation blend, a high vapor pressure natural gasoline may be used. This is sometimes done in the production of aviation gasolines as a matter of convenience; however, if maximum production of a high octane grade is required, other stocks with more favorable antiknock characteristics are used instead.

Natural gasoline may also be used as a source of both butane and propane for liquefied petroleum gases. Special natural gasoline specifications are sometimes set by the purchaser in order to balance operations based upon one of these special uses.

In conclusion, it is clear that the use of natural gasoline aids the refiner in meeting gasoline specifications but its use may be sharply limited by the performance requirement of the gasoline in which it is used.

Union Buys Los Nietos Co.

Union Oil Company has entered into a contract to purchase all of the outstanding capital stock of Los Nietos Company from the five grandchildren of the late Edward L. Doheny (Lucy Doheny Niven, E. L. Doheny III, W. H. Doheny, P. A. Doheny, T. M. Doheny), in consideration for a cash payment of $22,400,000 and 600,000 shares of Union Oil Company common stock, Reese H. Taylor, President, announced recently.

Los Nietos Company has been engaged since 1941 in the acquisition and development of oil properties, with its principal productive properties located in the Coalinga Nose, Pleasant Valley, and Guijarral Hills Fields in Fresno County and in the Kettleman Hills Fields in Fresno and King Counties, California. Los Nietos Company also has productive properties in West Texas and Canada.

Engineers' estimates place the net recoverable reserves of crude oil and hydrocarbons at in excess of 48,000,000 barrels. Los Nietos' net interest in production, after deducting all interests of others, amounted to 2,300,000 barrels of crude oil in 1947, 2,536,000 barrels in 1948, and 1,427,000 barrels in the first seven months of 1949. Net production during September averaged 7,800 barrels of high gravity crude oil per day.

Los Nietos has substantial untested acreage in California, the Rocky Mountain and Mid-Continent areas and Alberta. It owns various real estate and improvements including an 11-story office building in downtown Los Angeles, numerous other properties, and substantial working capital.

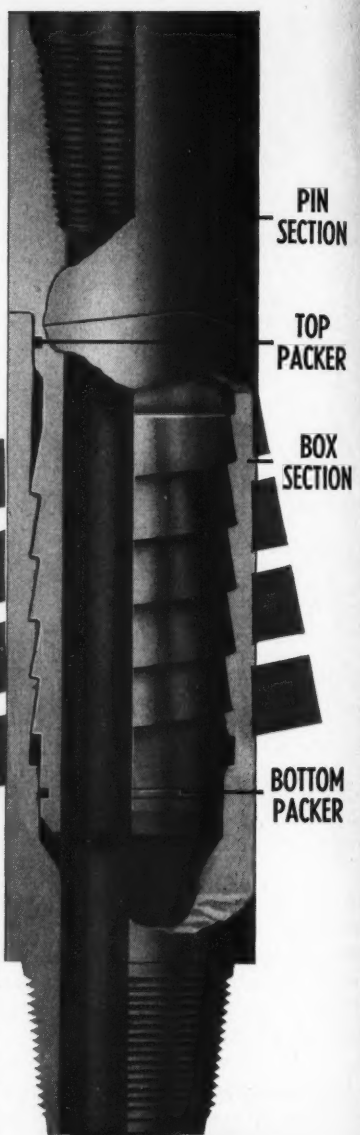
Union Oil Company is arranging for a private loan from a small group of insurance companies to finance the purchase. Promissory notes, which are to carry an interest rate of 2¾% and mature on November 1, 1974, will be issued in the amount of $40,000,000. This sum will also enable the Company to retire $14,600,000 of 3% Debentures.

RELEASES

RE-ENGAGES

LOCKS,

PACKS OFF



BOWEN SAFETY JOINTS give you four important Safety Joint advantages for drilling, testing and fishing operations: (1) foolproof release whenever desired; (2) easy re-engagement at will; (3) a locked-tight engagement during all drilling and fishing operations; and (4) positive pack off of any encountered internal or external fluid pressure. And this advanced design Bowen Safety Joint not only has proven merit as a safe, dependable Safety Joint, but it fits right into your present string as a regular sub with no out-of-size dimensions—it has the same outside diameter and fluid passage as its corresponding size tool joints!

Here's how it works.... and here's the reason why!

TO RELEASE a Bowen Safety Joint in the hole you need only rotate the drill string slightly to the left and lower until joint breaks. Then unscrew the two sections.

TO RE-ENGAGE a Bowen Safety Joint you simply locate the top of the Box Section and applying not more than one point of weight, rotate the string to the right until an increase in torque indicates that the Safety Joint is re-engaged.

FOR DRILLING, TESTING OR FISHING a Bowen Safety Joint can be rotated in *either* direction—it will withstand greater tensile or torsional strain than the drill string!

A Bowen Safety Joint's simple construction consists only of a Pin and Box Section with the Pin Section mounting two "O" type ring packers to seal off fluid leakage from high internal and external pressures. The Pin Section is machined to enter and make up in the Box Section and has a tool joint box for connecting to the drill pipe above the Safety Joint.

Simple construction, plus simple, fool-proof operation eliminate the dangers of conventional complex Safety Joint design to make the Bowen Safety Joint dependable on the toughest drilling, testing and fishing operations.

MORE "DOGHOUSE DATA"

BOWEN FISHING TOOL COMPANY

SANTA FE SPRINGS, CALIFORNIA

VENTURA • BAKERSFIELD • AVENAL • SANTA MARIA

CASPER, WYOMING

Export: S. R. BOWEN CO., 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

With Drilling Contractors

Total well footage drilled by Brown Drilling Company of Long Beach reached 2,000,000 ft. during August last. This was the gist of an official announcement, which explained that the mark was achieved while the company was drilling its 557th well on contract. Brown Drilling back in 1937 was operating with just one home made rig. The company currently has no less than five strings of tools active in California. Each rig is fully unitized and enhanced by the latest streamlined equipment. Brown's present state jobs include Ohio Oil's Vasquez No. 1 at Del Valle, Standard's McDonald Farms No. 5 on McDonald Island, Brazos Oil and Gas Company's Community No. 1 in the Stockton area, Union's Alexander No. 3 at Santa Fe Springs and Standard's No. 368-29R at Elk Hills. In addition, the contract organization is drilling on its own seventh well on the McGregor Ranch at Wichita Falls, Texas. Exploratory operations on the lease will continue at the rate of about two wells a month until 650 acres are developed fully. Brown's plans call for using converted warships in development of prospect ground for the American-Independent Oil Company in the neutral zone at Kuwait and Saudi Arabia. The ships will be used as floating bases for drilling crews operating inland a distance as great as 20 miles.

The program of incentive management and profit sharing, formulated by Thomas P. Pike Drilling, has paid dividends for both the company and employees. President Tom Pike has distributed profit sharing checks for the fiscal 1948-1949 years. The contract drilling executive attributed increased profits of the company and the unusually high record to the splendid and wholehearted cooperation of employees.

L. A. Whipple, vice president of Rocky Mountain Drilling Company, Los Angeles, is currently spending much time at the company field office at Dominguez. Whipple some weeks ago vacationed in the mountain states.

W. W. (Bill) Cline, president of San Joaquin Drilling Company, is fast regaining his health, following surgery at a Los Angeles hospital. In addition to more than half a dozen contract jobs in California, San Joaquin Drilling is sinking wells in Sweetwater County, Wyoming.

Carl Weller, Coalinga, is the contract driller of Airways Petroleum Corporation's interesting well in the Corona area of Riverside County.

New offices of the Thomas P. Pike Drilling Company are in the Subway Terminal Building, 417 South Hill street, Los Angeles. Telephone number is MAdison 9-1681.

Barnes & Shadrick is in charge of drilling Bacon No. 1 in the Bacon Hills area for R. E. Bering and the Mitchel Company.

Owens Drilling Company is the contractor on the Thornbury Drilling Company Thornbury-Oceanic No. 2 well in Eureka Canyon, Ventura County.

Buaas Drilling Company scored another drilling success in Cuyama Valley when it completed F. C. Griggs' Norris-Cuyama No. 3. Location is not far from where oil was first produced at Cuyama.

Santa Maria Drilling Company is the contract driller of the C. W. Colgrove Hotchkiss No. 15-2 on Sec. 2-13s-13e, Madera County. Drill site is about 9 miles southwest of Firebaugh.

Santa Fe Drilling Company has given the final touch to the Continental Oil Company Grubb No. 73-2 in the San Miguelito field. Initial flow from 8404 ft. was about 1800 barrels daily.

Dunlap & Graham completed one of the most interesting wells in California in recent months when it brought on to production the Northwest Syndicate-British American KRD No. 33-10 at Raisin City. Rather than an extension well, it may be a discovery of some importance. The contractor has completed Pacific Lighting Corporation's Miller No. 5 in the Goleta gas field. The contractor has several other strings of tools active in California oil areas.

The recent death of William Walker, 76, president of the California Drilling Company, recalls that previous to 1925 he was vice president and general manager of the sales and marine department of General Petroleum Corporation. He was head of the drilling organization since 1925.

San Gabriel Oil Company's San Gabriel No. 1 on Sec. 32-4n-19w at Newhall-Placerita is drilling ahead under the direction of Sierra Drilling Company.

The A. C. Anderson Black Butte No. 1 wildcat well in the Victorville area in San Bernardino County is a contract job with J. L. Scoggin. Burke Drilling Company is the contractor on the Western Research Lab., Inc., Yucca No. 1 test in the Cajon area of the county.

T. & E. Drilling Company is drilling Helen No. 1 on Sec. 23-11n-18w in the Tejon area for Hering Oil Company.

Personalities IN THE NEWS

Conklin and Tyler Advance at Du Pont

David H. Conklin, West Coast district manager for Du Pont's Petroleum Chemicals Division, has been promoted to assistant sales manager with headquarters in Wilmington effective October 17.

David H. Conklin

Ray E. Miller, Petroleum Chemicals sales director, said Mr. Conklin will fill one of two assistant sales managerships in the division, reporting to Emory M. Fanning, sales manager. Mr. Conklin will be in charge of promotion activities at the start. E. Hearn Simpson will continue as assistant sales manager in charge of district offices and staff activities.

George L. Tyler, West Coast sales representative, will succeed Mr. Conklin as manager of the district office in Los Angeles.

The Petroleum Chemicals Division markets Du Pont's tetra-ethyl lead anti-knock compounds for gasoline.

Mr. Conklin was born in Battle Creek, Mich., on June 30, 1913, and received his bachelor of science degree in mechanical engineering at the University of Michigan in 1935. He went to work for Ingersoll-Rand following graduation and was assigned to the company's Los Angeles office, handling sales, service and installation of industrial and oil field equipment.

He served in the Navy during the war and received the Order of the British Empire for meritorious service in connection with the repair of British ships at the U. S. Naval Operating Base at Londonderry, North Ireland. He returned to Ingersoll-Rand upon release from the service as a commander in November, 1945. He came with Du Pont in May, 1947, and in August of that year was made manager of the Los Angeles office.

George L. Tyler

Mr. Tyler was born in Grayling, Mich., July 23, 1898. He is a law graduate of the University of Southern California. Since 1922 he has been associated with the oil industry of California in various capacities. He was secretary-treasurer of the California Natural Gasoline Association for nine years before he joined Du Pont in 1947.

Jack McKeon, veteran member of the California petroleum industry, who has the enthusiasm and appearance of a man of 50, marked his 73rd birthday on October 17. He has been producing oil in California since 1906.

Lon Hughes, of the Hughes Organization in San Francisco, was in attendance at the California Manufacturers Association annual meeting in Los Angeles. Hughes at one time was in charge of the Los Angeles office of the Oil Industry Information Committee. Earlier he was financial editor of the San Francisco Examiner.

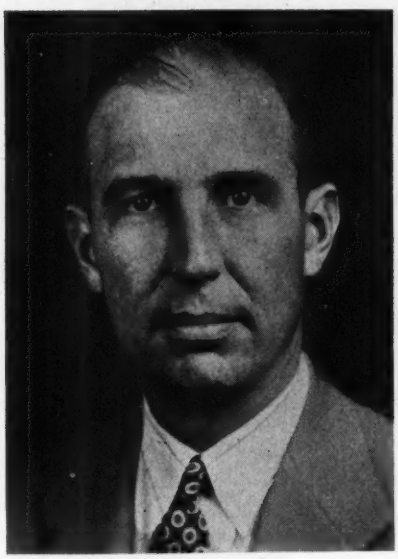
Tevis Morrow, Los Angeles oil operator, traveled by plane to be in attendance at the Texas-Oklahoma football game in Dallas. Before entering the California oil picture about a year ago, Morrow centered his attention on his Texas oil properties.

Bob Roberts of Standard of California has announced that the company is distributing a 30-page publication, "Oil Pictures," to teachers and students in the West. The book consists of a series of pictures illustrating exploration, drilling, refining, transportation and distribution activities of the oil industry.

Lloyd A. Lewis, Shell Oil Company geologist, currently makes headquarters at North Sacramento. He formerly was active in the Paso Robles area.

A. P. Hynes has been appointed manager of the Wilmington district for Shell Oil Company. With the company since 1933, Hynes during the past two years was on a special assignment in Washington, D. C.

O. W. Morgan, Jr.



B. A. Hilliard, Jr.

Changes in Byron Jackson Co. Personnel

E. S. Dulin, president of Byron Jackson Co., announces the appointment of O. W. Morgan, Jr., as manager of export sales of the company's oil tool division. Mr. Morgan will make his headquarters in New York City in mid-November. Mr. Morgan will also represent the Patterson-Ballagh Division of Byron Jackson Co. and International Cementers, Inc., manufacturers of a complete line of oil well cementing equipment. B. A. Hilliard, Jr., will succeed to Mr. Morgan's position as sales manager of the company's oil tool division.

Both Messrs. Morgan and Hilliard entered the company's employ in the mid-thirties and have a well rounded experience in shop and field as well as in marketing.

Fluor Promotes Owen W. Gaudern

The Fluor Corporation, Ltd., of Los Angeles, designers, engineers, and constructors for the gas, petroleum and allied industries, announces the promotion of Owen W. Gaudern to the position of Manager of Purchases.

Gaudern entered the purchasing field with the Neilan Company of Los Angeles. In 1934 he joined Fluor and a year later was transferred to the Purchasing Department.

Owen W. Gaudern

His rise to the top post in Fluor's Purchasing Department is marked with successful assignments, such as the Shell Oil Company project at Vancouver, B. C., in 1946. Prior to this promotion, he served as the Assistant Manager of Purchases for Fluor.

Mark Stanchfield, 57, former mayor of Burbank and member of a pioneer California family, died of a heart ailment. He was a holder of considerable interests in both the oil and mining industry in California. His grandfather was Luis Arenas, first Alcade of Los Angeles.

Rogers E. Enders has been named pipeline superintendent for Hancock Oil Company at Long Beach. He joined the company 17 years ago.

Dr. George Gaylord Simpson, eminent authority on the evolution of ancient mammals, delivered the Hitchcock lectures at the University of California at Berkeley this fall. Dr. Simpson is credited with having made possible many advances in man's understanding of evolution in the dawn of animal life. The distinguished paleontologist is with the American Museum of Natural History, New York City. He heads the department of geology and paleontology.

A seminar in petroleum engineering is being held at the high school in Taft. Sponsors are the University of California college of engineering at Los Angeles and the Taft evening school. San Joaquin Valley west side petroleum engineers and geologists aided in mapping out the seminar. They were H. D. Campbell, Franco Western: C. L. Doyle, General Petroleum; C. T. Murray, U. S. Geological Survey; and Murray Putnam and Arthur Turman, Standard of California.

Gov. Earl Warren was chief speaker at a California safety conference called at the request of President Truman to probe the cause of accidental deaths. Sponsors were the National Safety Council, safety associations of California, American Society of Safety Engineers and the Southern California Industrial Safety Society. Place of the meeting was Los Angeles.

Frank J. Taylor, well known author, is preparing a history of Union Oil Company, which will be used in conjunction with the firm's 60th anniversary next year. Taylor has written for leading national publications, particularly stories and articles relating to oil.

Raymond Lowey Associates has drawn a new service station design for Union Oil. It is scheduled to be used in all future construction of company filling stations.

A TIME-SAVER

★ PERFORATE
and
● TEST
in a single run

SHOOT-N-TEST
Trademark
FORMATION AND CASING TESTING
JOHNSTON

When unitized, the JOHNSTON "SHOOT-N-TEST" GUN PERFORATOR and the JOHNSTON FORMATION TESTER perforates, secures water shut-off information, does exploration work or testing for actual production all in one round trip. Write today for information on how this combination saves time, money, and equipment.

M. O. JOHNSTON OIL FIELD SERVICE CORPORATION
3035 Andrita St., Los Angeles 41, Calif.
Serving California—Rocky Mountains—Canada

JOHNSTON OIL FIELD SERVICE CORPORATION
5702 Navigation Blvd., Houston, Texas
Serving Mid-Continent—Permian Basin

Nomads Oct. Meeting

The Nomads regular monthly dinner meeting, held at the Jonathan Club, Wednesday October 12th, will be remembered as a highlight in entertainment of Nomads meetings by those present. The raise in prices did not seem to deter the members for there were present the usual goodly number of 59.

Whoever found the accordian player really did a good job. She could not only squeeze that box, but she knew how to "handle" the boys.

Mr. Phil McConnell of the American Arabian Oil Co., one of the two speakers of the evening, told us what is going on in the oil industry in the Persian Gulf countries, and also some of the problems encountered in dealing with the Arabs. He explained the attitude of the foreign oil operators and why they spend so much money and effort in trying to accommodate western ways and thinking to those of the Far East. If all of the officers of the foreign oil operators in that area have the same fine point of view as Mr. McConnell I am sure that the United States need have no fear of unfriendly relations with either the native governments or its peoples.

The other speaker, Tony Cabootch, of radio fame, surely put one over on all of us, with the exception of Lee Laird. He was introduced as a representative of the Brazilian Government and a delegate to the UN. I don't believe any of us ever laughed so much in all of our lives. He put his act over beautifully as well as very humorously. When we discovered it was just an act, and who he really is, he opened up with some stories that kept us in an uproar for another half hour.

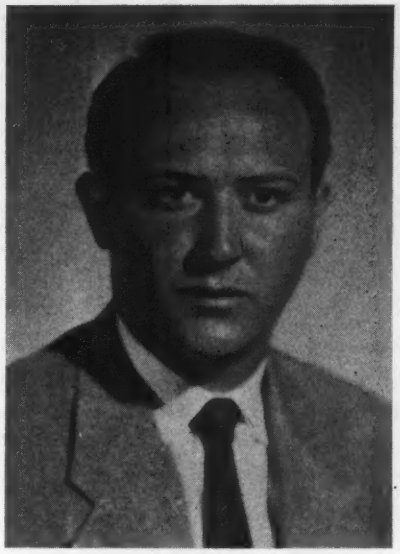
Drilling Mud Committee Guests of Oil Base, Inc.

On the night of September 28, seventeen members of the Drilling Mud Committee of the Southern California Chapter of the API were guests of Oil Base, Inc., at the plant in Compton, California. They were shown the manufacturing processes of grinding, mixing, sacking and storing Black Magic, and mud weighting materials. Control tests were explained during the trip through the laboratories. Later refreshments and dinner were served.

Members of the committee who attended were: A. C. Nestle, The Texas Co., Chairman of the Committee; W. T. Cardwell, Jr., California Research Corp.; J. M. Catterton, Tide Water Associated; C. E. Ensley, Richfield Oil; A. L. Frye, Consultant; F. H. Good, The Texas Co.; B. R. Hawkins, E. B. Hall and Co.; A. B. Hockman, Rocky Mountain Drilling Co.; Frank E. Jones; Frank E. Jones Co.; J. W. McEver, Shell Oil Co.; D. C. Nellis, Shell Oil Co.; R. W. Richmond, General Petroleum Corp.; Jim Schaeffer, General Petroleum Corp.; Earl Smith, Shell Oil Co.; R. A. Stoner, California Research Corp.; Scott Temple, Union Oil Co.; C. C. Wright, Oil Well Research.

De Ainza Joins Oil Base

Oil Base, Inc., manufacturers of Black Magic oil base drilling fluid, annouce the appointment of Charles De Ainza to their staff of service engineers. A graduate of the College of Engineering, University of Southern California, De Ainza served with the Air Force during the war. He was a bombadier with the 95th Bomb Group stationed in England, under the command of Colonel Le May, now General Le May, second in command of the U. S. Air Force. De Ainza will be stationed at the head office in Compton, California.



Charles DeAinza

R. E. Carlson, Signal Oil Company, has been transferred from branch manager at Long Beach to Los Angeles branch manager.

Foreign visitors who attended the Nomads Meeting October 12, 1949: Seated left to right: R. A. Drueke, Gulf Oil Company; O. G. Webb, Baker Oil Tools; Philip C. McConnell, Arabian American Oil Company; D. D. Donovan, International Petroleum Company; Standing left to right: V. W. Fletcher, Asiatic Petroleum Corp.; C. C. Smart, Iraq Petroleum Company; Scott B. Houghton, Arabian Oil Co.; Z. W. McCoy, Texaco Colombia; and James Worsdall, Williams Bros. Corp.

NO OTHER EQUIPMENT—no other method of cementing—provides such assurance of successful "first-time" cementing as the exclusive Baker Principle of *whirling* the cement up and around the casing which is effectively centered in the well with BAKER MODEL "G" CASING CENTRALIZERS.

Not only can you REMOVE BRIDGES which might stick the casing; not only can you wash the wall of the hole to help REMOVE MUD CAKE and leave the formation prepared for effective bonding with the cement to follow, but the *downward*, then *upward* ***whirling*** motion of the cement slurry REDUCES THE HAZARD OF CHANNELING TO A MINIMUM, and assures COMPLETE ENCASEMENT OF THE CENTERED CASING at the critical shoe joint with a uniform body of cement.

RESULTS ARE WHAT REALLY COUNT

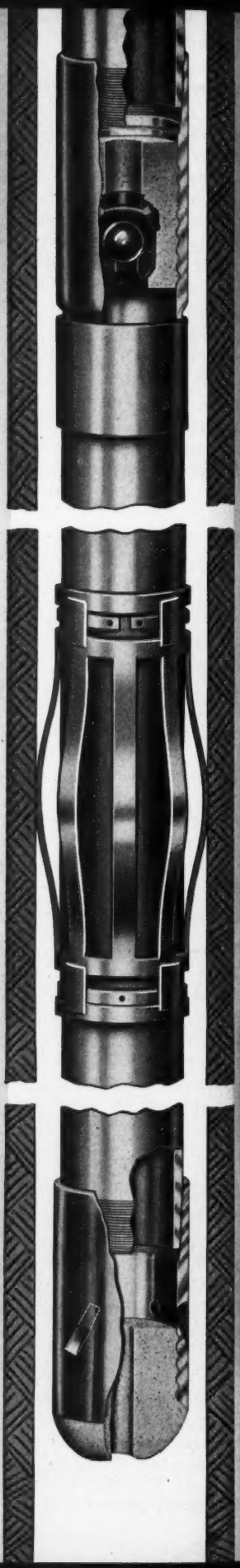
When you use Baker Cement Equipment you *know* that the buoyant ball will seal against the resilient rubber ring (backed by sturdy interior construction) to provide a leak-proof back-pressure valve for floating those long, heavy strings of casing, and to seal instantly at the slightest reversal of pressure and prevent any return flow of the cement slurry. You *know* you will secure maximum cementing efficiency by the ***whirling*** cement slurry, combined with complete drillability. And you will enjoy that peace of mind which comes from using equipment of PROVEN DEPENDABILITY with a record of successful performance in thousands of wells under every imaginable condition.

You are assured of RESULTS when you use Baker Hook-Ups as pictured at right using a BAKER WASH-DOWN WHIRLER GUIDE SHOE (Product No. 121) with BAKER MODEL "G" CASING CENTRALIZERS spaced throughout the cementing area to provide *maximum centering force at the critical cementing point.* Then, with a BAKER CEMENT FLOAT COLLAR (Product No. 101 M & F) positioned a joint or two above the shoe, you have the world's best "float valve" for safety, plus a "stop" for the cementing plug so that cement tailings are retained inside of the casing.

For deeper wells, where maximum "floating strength" is a worthwhile precaution, a Baker Cement Wash-Down Whirler Float Shoe (Product No. 120) used on the bottom of the string will give you double safety at negligible extra cost.

Call the nearest Baker representative or office. Find out how dealing at Cementing Headquarters means SUPERIOR RESULTS FOR YOU.

BAKER OIL TOOLS, INC.
HOUSTON · LOS ANGELES · NEW YORK



Here is visual proof of what *whirling* does for you...

The downward hydraulicking action of the circulating fluid through the baffled side down-whirler ports and the restricted bottom passageway, effectively remove bridges and permits safe running of the string of casing.

When washing the formation at the cementing point to condition the hole, the "whirling" motion of the fluid helps remove mud cake from side walls. This *downward* whirling is far superior to any side jetting action, and does not cause caving or crumbling of soft formations.

The "whirling" motion given to the cement slurry as it is discharged from a Baker Wash-Down Whirler Shoe causes the cement to encase the centered shoe joint with a more uniform body of cement, and reduces to a minimum the hazard of channeling.

Coalinga-Kettleman A. P. I. Barbecue

HARRY THOMPSON, Standard Oil of Calif., Avenal, Calif.; WALLY HAYES, Plaugher & Associates, Bakersfield; BOB ALDRICH, Standard Oil Co. of Calif., Avenal, Calif.; LOUIE SCHUETZE, Standard Oil Co. of Calif., Avenal, Calif.

O. W. MOORE, Standard Oil Co. of Calif., Coalinga, Calif.; FRANK BOWEN, Standard Oil Co. of Calif., Coalinga, Calif.; TEX. THOMAS, Standard Oil Co. of Calif., Avenal, Calif.; VIC. DAVIS, Davis Electric Co., Coalinga, Calif.

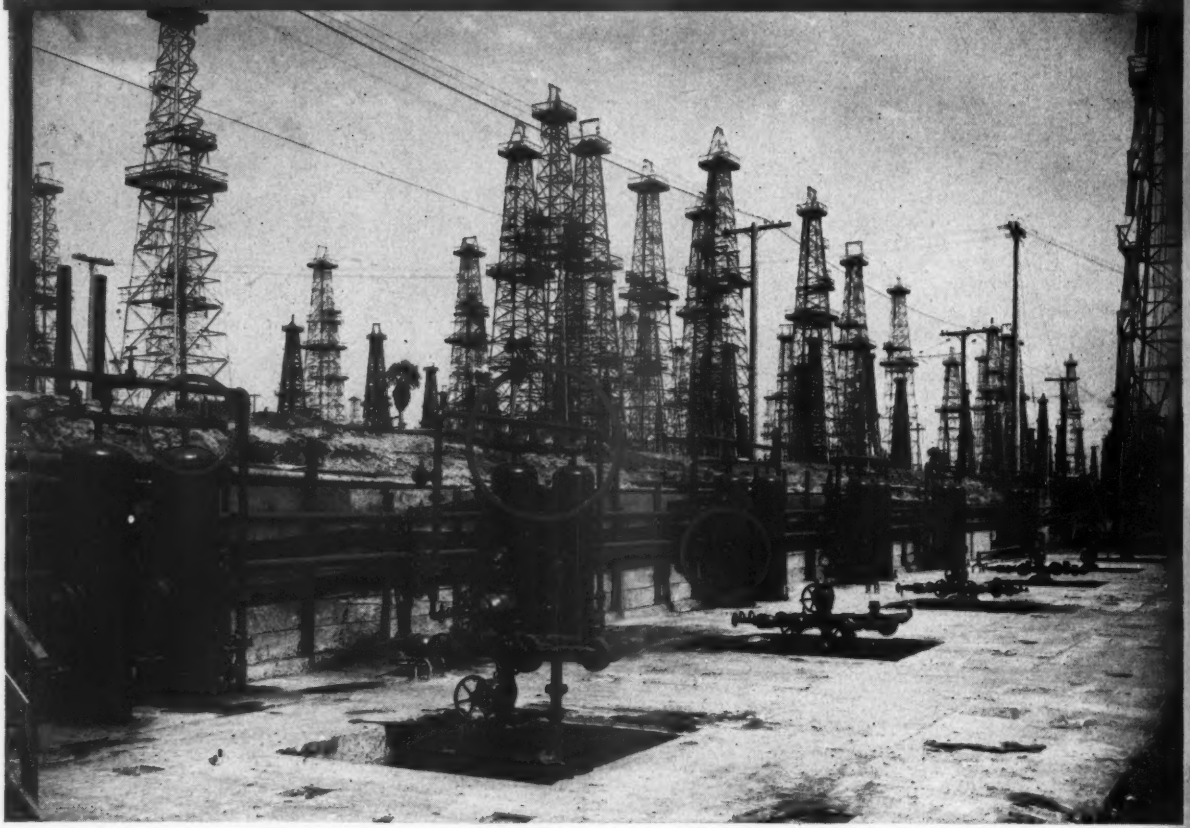
DON NELSON, Standard Oil Co. of Calif., Coalinga, Calif.; CAL. TOWNSEND, Standard Oil Co. of Calif., Taft, Calif.; H. E. WILSON, Standard Oil Co. of Calif., Coalinga, Calif.

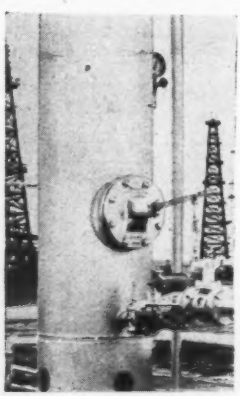
DEACON BROWN, Oil Base Inc., Bakersfield, Cal.; D. L. WILSON, Oil Base Inc., Los Angeles, Calif.; ART MOORE, Oil Base Inc., Los Angeles, Calif.

Ed. Russell, KNDA, Avenal, Calif.; Frank Bowen, St'd Oil of Calif., Avenal; Roy Agustus, Willis DONOHUE, General Petroleum Corp., Burrel, Calif.; GEORGE THOMPSON, Thompson Materials & Construction Co., Avenal, Calif.; ROGER BROWN, Bethlehem Supply Co., Bakersfield, Calif.

R. W. WALLING, Chairman Coalinga-Kettleman Chapter A.P.I., Div. of Oil & Gas, Coalinga, Calif.; H. H. DIEVENDORFF, Robt. S. Lytle, Coalinga, Calif.; W. G. MURPHY, Sportsman Charter Flying Service, Los Angeles, Calif.; MORTIMER KLINE, Attorney, Los Angeles, Calif., Principal Speaker, Barbecue.

OIL PRODUCERS RELY ON *RELIANCE* FOR MAXIMUM OUTPUT





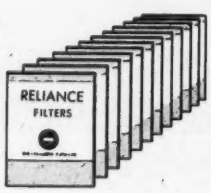
Wherever gas is used in the oil fields, you will find Reliance Regulators on the job, contributing their part to the ever growing output of petroleum.

Reliance Regulators assure positive pressure regulation and control at the boilers which supply the power and at every step from the tapping of the crude to the refining of the fractions. For 34 years Reliance has served the oil industry as the source of supply for dependable regulators, with an established reputation for trouble-free and economical service.

Reliance Regulators are available for many types of oil field installations and in a complete range for every type of service.

Write us TODAY for current bulletins giving complete information.

RELIANCE REGULATOR DIVISION
AMERICAN METER COMPANY
INCORPORATED
1000 MERIDIAN AVENUE, ALHAMBRA, CALIFORNIA

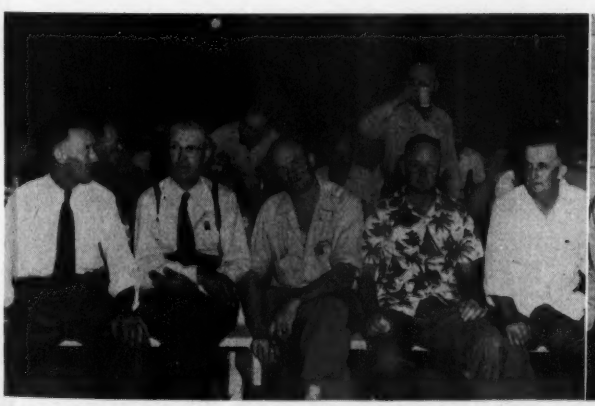


W. W. FLURRY, Elm Street Market, Coalinga, Calif.; ARNE JOHNSON, Bethlehem Supply Co., Avenal, Calif.; BILL TAYLOR, Standard Oil of Calif.; Coalinga, Calif. (Chief Chef); FRANK WILDE, K.N.D.A., Avenal, Calif.; C. E. FRANKLIN, Bethlehem Supply Co., Avenal, Calif.; ERDIE EUBANKS, Amerada Petroleum Corp., Riverdale, Calif.; STAN MYRICK, Avenal, Calif.; C. E. GRAVES, Amerada Petroleum Corp., Riverdale, Calif.; Wm. M. LYLES, W. M. Lyles, Contr., Avenal, Calif.; CAL. TOWNSEND, Standard Oil Co. of Calif., Taft, Calif.; BILL CRANE, Howard Supply Co., Avenal, Calif.

DON NELSON, Standard Oil Co. of Calif., Coalinga; GEORGE FURMAN, Standard Oil Co. of Calif., Coalinga; R. E. SMITH, Standard Oil Co. of Calif., Coalinga, R. A. BOOTH, Standard Oil Co. of Calif., Coalinga; C. L. ZEHNER, Standard Oil Co. of Calif., Coalinga; H. E. WILSON, Standard Oil Co. of Calif., Coalinga, RALPH FRAME, Division of Oil & Gas, Coalinga, Calif.; J. T. LOWEN, Standard Oil Co. of Calif., Coalinga, Calif.; E. G. SMITH, Coalinga Junior College, Coalinga, Calif.; W. E. COLON, Standard Oil Co. of Calif., Coalinga, Calif.; JIM CHESCHEIR, Tretolite Co. of Calif., Coalinga, Calif.

CHAS. RENO, K.N.D.A., Avenal, Calif.; C. B. McGARREY, McGarrey Realistate, Avenal, Calif.; Jessie Pozzabam, Entertainer, Fresno, Calif.; BASIL LOFTIS, Robt. S. Lytle, Coalinga, Calif.; BILL MOUREN, Farmer, Huron, Calif.; JOHN FARNER, So. Calif. Gas Co., Avenal, Calif.; DON CURRY, K.N.D.A., Avenal, Calif.

E. J. ROSE, Los Nietos Oil Co., Avenal, Calif.; TEX. THOMAS, Standard Oil Co. of Calif., Avenal, Calif.; J. T. Lowen, Standard Oil Co. of Calif., Coalinga, Calif.; W. G. Earl, Standard Oil Co. of Calif., Avenal, Calif.; Ray Sprague, Hayes & Sprague, Los Angeles, Calif.; Stan Watkins, K.N.D.A., Avenal, Calif.; Bert Wilson, Standard Oil Co. of Calif., Coalinga, Calif.; Les. Ballard, B. & G. Service Co., Avenal, Calif.

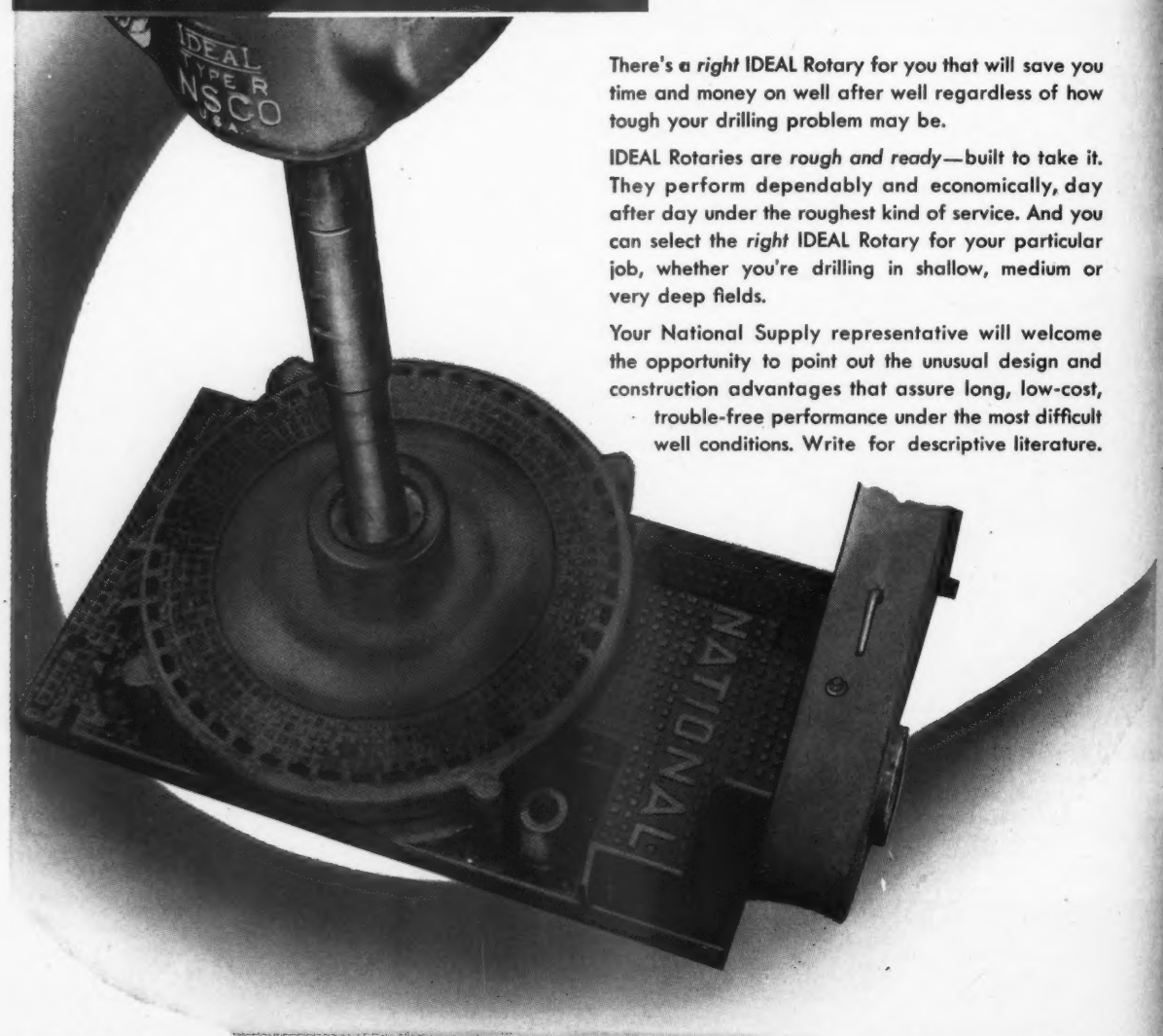


FRANK WILLIS, Cross Lbr. Co., Coalinga, Calif.; STEEL GATES, Ward Seneca Oil Co., Coalinga, Calif.; Bob Franks, WALT FISHER, Section Thirty Oil Co., Coalinga, Calif.; AUBREY FINCHER, Newton Drlg. Co., Avenal, Calif.

J. H. PIPPIN, Automotive Supply Co., Coalinga, Calif.; BILL MOUREN, President, Polvadero Country Club, Coalinga and Avenal, Calif.; CARL PETERSEN, Petrolia Hotel, Coalinga, Calif.; DON COY, Lane-Wells Co., Coalinga, Calif.

ROUGH AND READY ROTARY TABLES

...for every drilling depth



There's a *right* IDEAL Rotary for you that will save you time and money on well after well regardless of how tough your drilling problem may be.

IDEAL Rotaries are *rough and ready*—built to take it. They perform dependably and economically, day after day under the roughest kind of service. And you can select the *right* IDEAL Rotary for your particular job, whether you're drilling in shallow, medium or very deep fields.

Your National Supply representative will welcome the opportunity to point out the unusual design and construction advantages that assure long, low-cost, trouble-free performance under the most difficult well conditions. Write for descriptive literature.

THE NATIONAL SUPPLY COMPANY

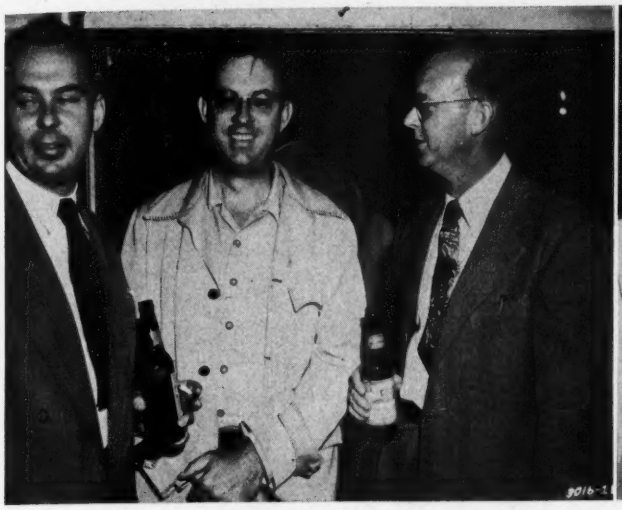
GENERAL SALES OFFICE: **TOLEDO, OHIO**

DIVISION OFFICES: **CASPER; FT. WORTH; PITTSBURGH; TULSA; TORRANCE.**
EXPORT: **NATIONAL SUPPLY EXPORT CORPORATION, 30 ROCKEFELLER PLAZA, NEW YORK, N. Y., U. S. A.; RIVER PLATE HOUSE, 12 SOUTH PLACE, LONDON, E. C. 2.**

THE NATIONAL SUPPLY COMPANY NSCO — NATIONAL BLUE PRODUCTS

THE INDUSTRY'S MOST COMPLETE LINE OF OIL FIELD EQUIPMENT

A. P. I. Basin Chapter Barbecue



Jim F. Alexander, Bob Alder, Frank Webb.

C. F. McMahan, Joe Rodgers, Frank Smith.

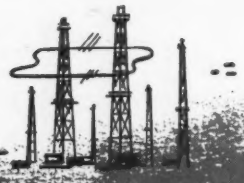
Lon Webb, Lou Rodgers, Ray Hancock.

John Isaacs, Jim Noon, C. T. Apgood, Jud Hillman.

Bob Shira, Tiny Roe, Cliff Divilbiss.

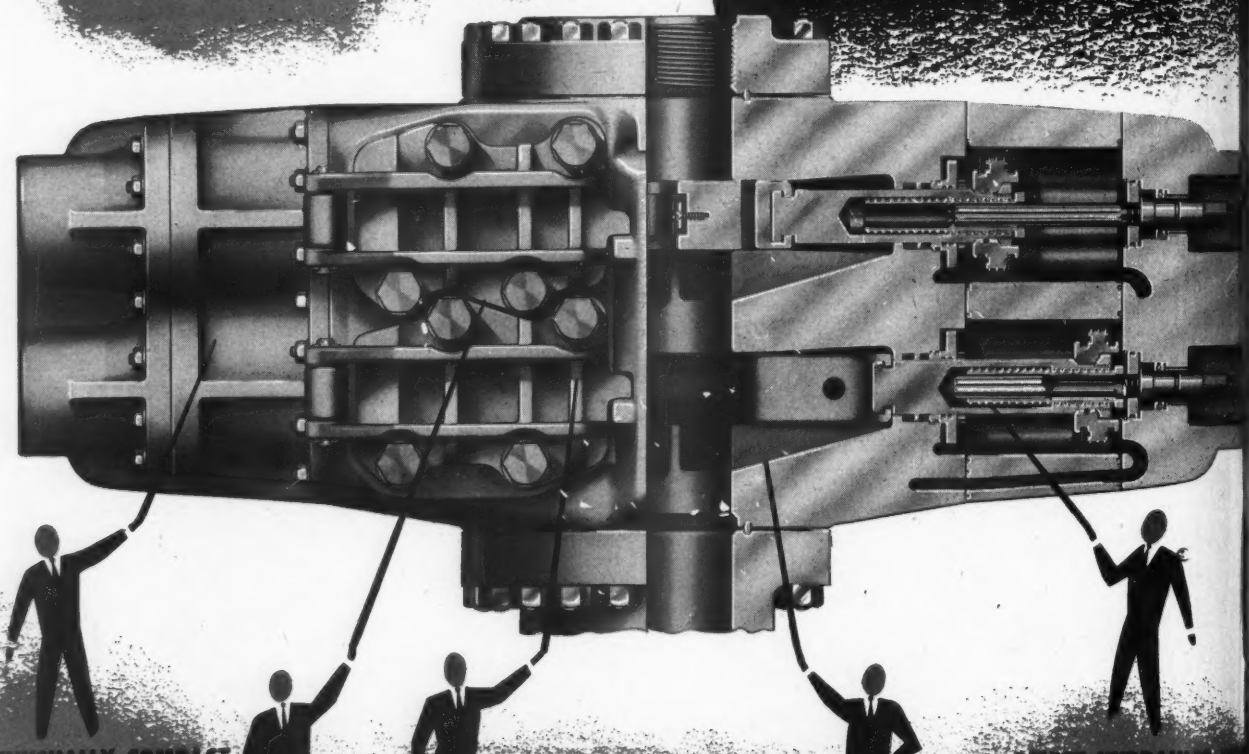
Babe Phillips, C. B. Goldman, W. F. Lopp.

Check it over—the greates



Here's what oil operators everywhere have been waiting for—a *Hydraulic* Cellar Control Gate that is COMPACT and COMPLETELY ENCLOSED . . . as well as simple to service, easy to install and extremely dependable. You get all these features—*and many more, too*—in the revolutionary new Shaffer Hydraulic Cellar Control Gate, the greatest control gate advancement in a decade.

The SHAFFER Hydraulic CELLAR CONTROL GATE!



UNUSUALLY COMPACT
A Double Gate measuring less than 30" in overall height, even in sizes as large as 13⅝" . . . smaller sizes proportionately less!

TWO GATES IN ONE
Two separate ram compartments unitized into one compact body—actually two Hydraulic Gates in one!

FAST RAM CHANGES
Simply unbolt door on side of Gate, slide old ram out, change ram, slide ram back in, bolt door shut. It's as simple and fast as that . . . and complete ram changes can be made whether pipe is in or out of the hole!

QUICK-DRAINING BODY
Rams travel on narrow guide ribs high above a steeply-sloped self-draining ram compartment bottom. No detrimental sand or mud accumulation!

DIRECT HYDRAULIC D
Fluid Power—Direct Action—Positive Operation! All moving parts protected within the body.

...ontrol gate advancement in a decade!

AFTER A LONG PERIOD of engineering development and testing, Shaffer proudly announces its new Shaffer Hydraulic Cellar Control Gate—*two* separate ram compartments unitized into *one* body *with an overall height of less than 30" even in sizes as large as 13⅜"*—as well as space savings in both length and width!

That's *real* compactness—that saves valuable cellar space on every rig where it's installed—that permits more compact hook-ups, more space in the cellar for other equipment, plus vital space savings in storage and shipping.

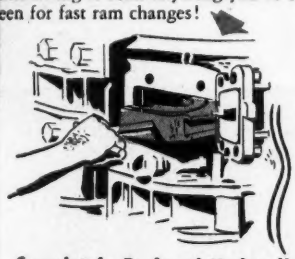
Note in the accompanying table the amazingly small overall height of the new Shaffer Hydraulic Gate in the various sizes. Then remember—this small height includes *two* separate ram compartments in the *one* body—in reality two hydraulic gates in one.

SHAFFER HYDRAULIC GATE DIMENSIONS

Gate Size	7"		9"		10¾"		13⅜"	
Working Pressure (PSI)	3,000	5,000	3,000	5,000	3,000	5,000	3,000	5,000
Bore	7 1/16"		9"		11"		13⅝"	
A—Height ...inches	25	26½	25¼	27½	27½	30½	30	36¼
B—Width ....inches	28⅝	31½	31⅝	35¼	34¼	37⅝	40	40½
C—Length ...inches	70¾	70¾	71	72	79	81¼	88½	88½

New Simplicity In Changing Rams

Best of all, unusual compactness is only *one* of *many* new features in the Shaffer Hydraulic Cellar Control Gate. It's the simplest Gate you ever saw when it comes to changing rams. Each ram assembly is readily accessible through a quick-opening side door hinged to the Gate body. By simply unbolting the door and swinging it open, the ram assembly can be pulled right out. Change the ram assembly, slide it back in—then close and bolt the door. It's so simple, so quick, so time-saving it beats anything you've ever seen for fast ram changes!



Completely Enclosed Hydraulic Operation

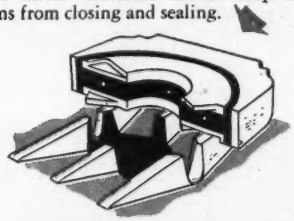
Here's something else—all moving parts in the hydraulic cylinder, including piston rod ram shafts, are completely enclosed. There are no moving parts projecting from the Gate—nothing to become damaged or wedged by loose pipes or timbers in the cellar—nothing to become corroded by salt fluids or chemical muds dripping down into the cellar. Even the locking shaft is completely enclosed and stays enclosed in all positions because it is non-rising.

Corrosion-Free Hydraulic Cylinders

All operating parts in the hydraulic cylinders are of either stainless steel or manganese bronze. Therefore, although hydraulic oil is recommended as the operating fluid, water can be used without risk of corrosion, rust or damage to parts.

Self-Draining Ram Compartments

Another important point—note how the rams travel on high narrow guide ribs raised above the steeply sloped bottoms of the ram compartments. No detrimental sand and mud accumulations can interfere with the operation of the rams because mud and sand drains right back into the well from the Gate body. Any that does remain is far below the ram operating level and does not interfere with free ram travel—therefore cannot keep the rams from closing and sealing.



Interchangeable Ram Blocks and Rubbers

Shaffer Hydraulic Cellar Control Gates have still another advantage—they use the same ram rubbers and ram blocks, size for size, that have proven so dependable in mechanically-operated Shaffer Cellar Control Gates. Where both types of Shaffer Gates are used in a field, ram rubbers and ram blocks can be used interchangeably, reducing inventories and simplifying maintenance!

GET THE FULL STORY of this great new Shaffer advancement. There are many other features you should know about. Write for complete details!

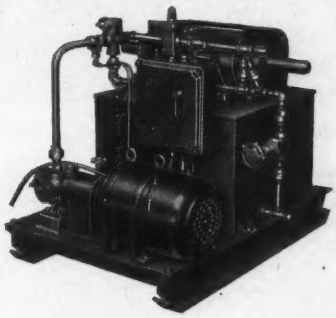
Send for your copy of the complete Shaffer catalog.

Compact Power Closing Units

Because of its lower overall cost, its savings in maintenance and its low freezing point, it is recommended that hydraulic oil in a closed system be used to operate Shaffer Hydraulic Gates. Two types of power closing units are available for supplying the necessary pressure—one operated by electricity, the other by air, gas, steam or water pressure—thus providing a type of power to meet every rig requirement.

Both types have high volume pumps which assure closing the Gates within seconds.

In addition Shaffer Hydraulic Gates can also be closed *mechanically*, assuring full protection in case of power failures.



Centralized Control Panel

Complete control of the power closing unit, as well as of the opening and closing of the rams in both compartments of the Gate, is centralized in a compact unitized control panel that can be placed alongside of the driller or at any other convenient location.

Three manually-operated 4-way hydraulic valves are built into the panel—two of the hydraulic valves control the opening and closing of the rams—one for each compartment of the Double Gate—and the third valve can be used to control other hydraulic equipment or to operate another Gate.

These valves can also be operated by remote control, permitting auxiliary control stations to be installed at a distance from the rig if desired —an important safety feature.

The entire control panel is unitized and can be moved from rig to rig with minimum installation and break-out time.

26 YEARS OF OIL TOOL LEADERSHIP

SHAFFER

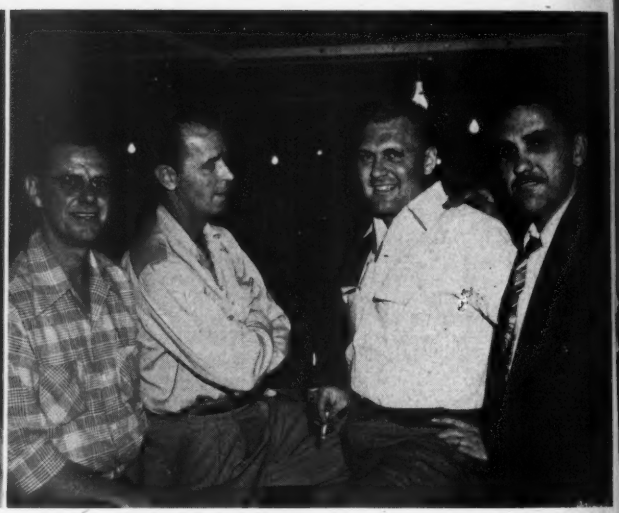
HIGH PRESSURE DRILLING AND CONTROL EQUIPMENT • FISHING TOOLS THAT EXCEL

SHAFFER TOOL WORKS, Brea, California • California Service Shops: Santa Fe Springs and Taft
HOUSTON, TEXAS, 6006 Navigation Blvd. • ODESSA, TEXAS, 1925 West Second Street
OKLAHOMA CITY, OKLAHOMA, Acme Oil Tool Company, 1001 S. E. 29th Street
EXPORT SALES OFFICE: Shaffer Tool Works, 500 Fifth Avenue, New York, N. Y., U.S.A.

Aldon Hair, Bruce Hall, top ticket sellers of Barbecue.

Gene Graham, Jack Skeehan, Frank Whipple, Larry Carpenter.

Standing: Wm. Anderson, Ward Bennett, Lon Webb; seated: Chas. Gandaubert, Bob Burns, Jim Watts.



G. M. Swoffer, Don Druen, R. H. Smith, Jim Keeley.

Fred Brown, Wm. Anderson, A. Ganong, Ward Bennett, Jim Watts, Chas. Gandaubert.

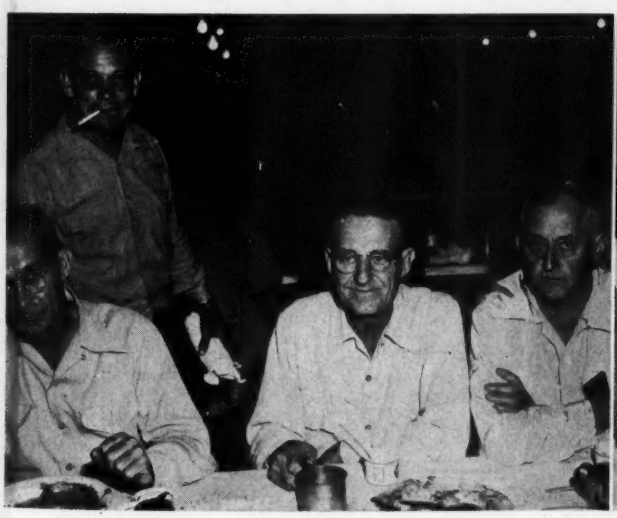
Bob Engle, G. W. Goldsmith, Chuck Evans, Wes Forsythe.

J. L. Stewart, Bob Eddy, John Stick, all of Lane-Wells Company.

Chuck Cotton, John Woodward, Jr., Jim Streager, Mickey McGuire (seated).

Paul Andrews, Bill House, Vic Barry, all of Signal Oil & Gas Co.

Front row: Bud Fobes, Dick Farmer, Perry Isham; Back row: R. L. Toney, Ed Peschke.



Willy Maurath, Frank Sweet, Van Wagner, Bill Lex.

V. M. Reed, Walt Graham, M. L. Reed, W. A. Hopkins.

1 plan helps prevent all 3

When you show the people in your company that you're interested in their welfare, they naturally react favorably. That's why *production goes up* when you boost your employee-participation in the Payroll Savings Plan. Here's how it happens:

The more U. S. Savings Bonds an employee holds, the more secure he feels. The more secure he feels, the greater his peace of mind—the more contented, careful, and productive he is on the job.

Those facts aren't just something we dreamed up. They're borne out in the experience of more than 20,000 companies promoting the Plan.

Everybody Benefits!

Bond sales spread the national debt, thus increasing our national economic security. And, of course, what's good for the nation is good for you and your business!

The individual Bond buyer gets back $4, when his Bonds mature, for every $3 he invested. That's a boon for him, and —multiplied by millions of Bond holders —represents a huge backlog of purchasing power that will help assure national prosperity through the years ahead.

Five Steps Boost Participation

1. See that a top management man sponsors the Plan.

2. Secure the help of the employee organizations in promoting it.

3. Adequately use posters and leaflets and run stories and editorials in company publications to inform employees of the Payroll Savings Plan's benefits to them.

4. Make a person-to person canvass, once a year, to sign up participants.

These first four steps should win you 40-60% participation. Normal employee turnover necessitates one more step:

5. Urge each new employee, at the time he is hired, to sign up.

Nation-wide experience indicates that 50% of your employees can be persuaded to join—without high-pressure selling. All the help you need is available from your State Director, U. S. Treasury Department, Savings Bonds Division. He is listed in your telephone directory. Wouldn't it be a good idea to call him right now, while it's on your mind?

The Treasury Department acknowledges with appreciation the publication of this message by

THE CALIFORNIA OIL WORLD

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

Field Development

Los Angeles Basin

Rothschild Oil Makes Crude Offer

Rothschild Oil has announced that it has forwarded letters to operators in the Placerita field offering to buy all their oil on a contractual basis. Harry S. Rothschild, company official, said his organization is in a position to accept all the crude oil offered at Placerita for processing in its refineries. He cited the fact that much of the best oil in the field is being sold at $1.25 a barrel. The company offered to contract for 23 gravity crude at $1.50 a barrel. Most of the crude produced at Placerita runs from 21 to 24 gravity. Proper evaluation of the reserves at Placerita is not considered possible at this stage of development. The limits first must be determined of two or three zones of varying gravity from the Pliocene to the Miocene. However, the close drilling on the subdivision area on the north half of the northeast quarter of Sec. 31-4n-15w will quicken depletion of the zones producing in that particular part of the field. This will naturally affect in some degree adjacent ground. Atlantic Oil has completed Klukas No. 1 on Sec. 31-4n-15w at 2078 ft. for 650 barrels a day. Also in is the Milton Barrett and Ernest W. Bysshe No. 1 on the section. It is putting out 900 barrels a day from 1720 ft. Lyndon R. Foster's new Foster No. 1 on the section is pumping 300 barrels from 1835 ft.

San Fernando Wildcat Digs

Following a twist off and recovery of 283 ft. of drill pipe fish, Standard of California is drilling on down at 3112 ft. with its Woo No. 1 wildcat near San Fernando in Sec. 19-2n-15w.

Del Valle Test Area

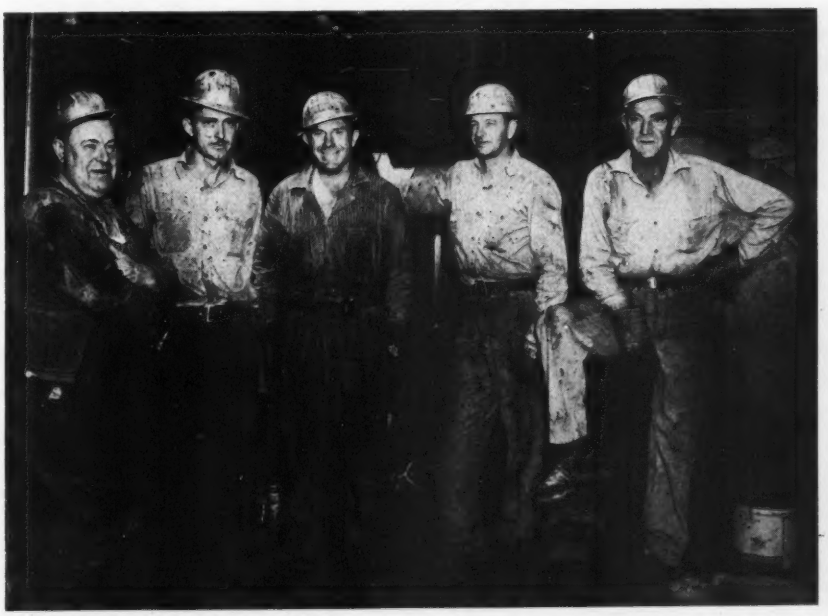
St. Helen Petroleum Company's Ladd No. 1 exploratory well in the Del Valle area, Sec. 7-4n-17w, is drilling below 3950 ft. At Southeast Del Valle, Humble Oil's N. L. & F. No. 1 test is making hole at 10,134 ft. Southern California Petroleum has completed a lease agreement with A. P. Quirk, et al, on ground at West Del Valle. Under the agreement the oil company takes over all of the 200-acre Daugherty Government lease in Secs. 8 and 9-4n-17w. In the Del Valle field proper, Standard of California is drilling at 3905 ft. in its Sepulveda No. 6 on Sec. 8-4n-17w. On Section 16-4n-17w, R. E. Havenstrite, operator, has reached 8400 ft. with Barnes No. 4, and 7100 ft. with Lincoln No. 16.

San Bernardino Wildcats Work

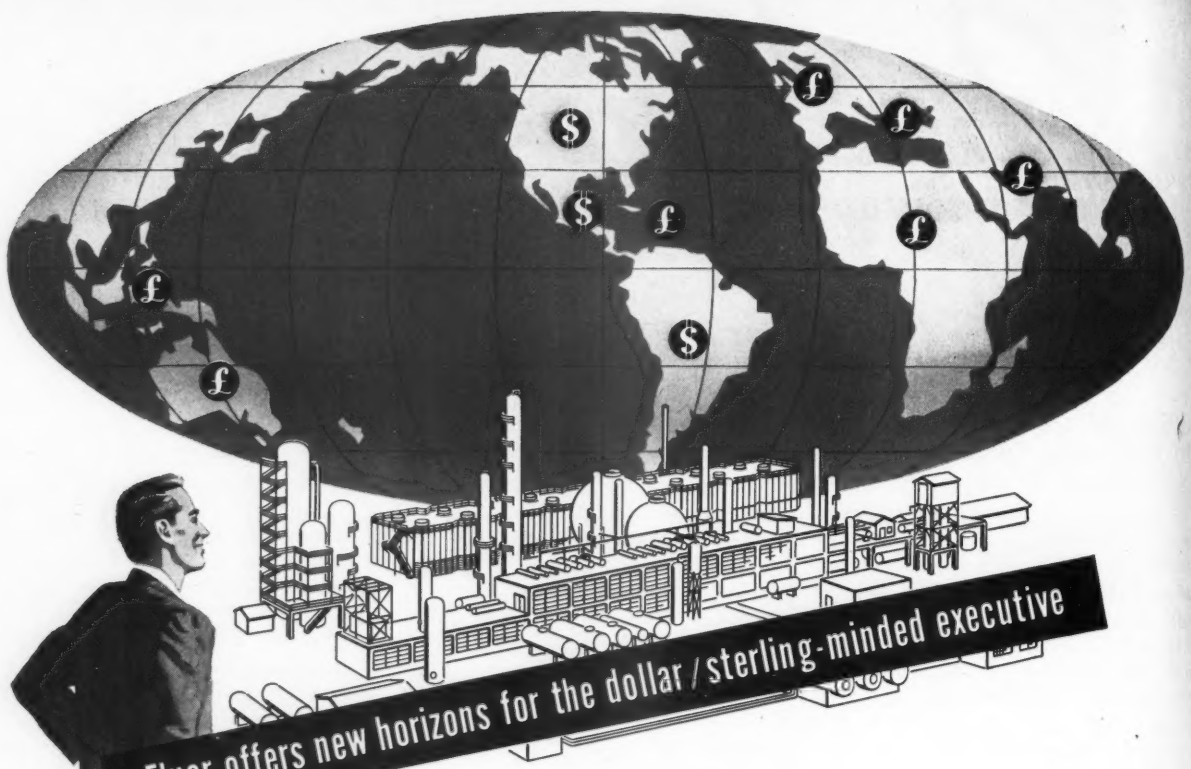
Near Victorville in San Bernardino County, A. C. Anderson was last reported digging at 2000 ft. in Black Butte No. 1 on Sec. 26-6n-7w. The H. T. and G. G. Widney No. 1 on Sec. 33-6n-4w is temporarily idle at 650 ft. The Western Research Laboratory, Inc., Yucca No. 1 explorer in the Cajon area, Sec. 1-3n-7w, is prospecting at 2400 ft. In the Hesperia area, Allied Oil & Gas Corporation is preparing to deepen from 1766 ft. its Moore No. 1 on Sec. 17-4n-1w.

Inglewood Well Works

Having plugged back from 9857 to 9688 ft., Standard Oil is ready to start redrilling its L. A. I. No. 4-3



Shell Oil Co., Inc.'s well, Baldwin Hills Community No. 1, left to right: C. E. Hillhouse, cathead; A. H. Bibby, floorman; C. R. Bitting, driller; A. W. Harris, piperacker; V. B. Douglas.



Fluor offers new horizons for the dollar/sterling-minded executive

TO FACILITATE the building of petroleum, chemical and auxiliary plants in the sterling and other areas, The Fluor Corporation, Ltd., is pleased to announce its association with Head Wrightson Processes Ltd., a British Engineering Organization, currently engaged in the engineering, supply and erection of units for Light Oil and Crude Oil Fractionation, Gas Separation, Solvent Extraction, Chemical Treating, Utilities Supply, Carbon Black Production, etc., within the British Commonwealth and other countries.

Unlimited Facilities... The agreement between The Fluor Corporation, Ltd., and Head Wrightson Processes Ltd. opens new fields for capital investment in the sterling and other areas by making available . . .

. . . Process design, engineering, purchasing, progressing, inspection, shipping and erection supervision of petroleum and chemical processing facilities throughout the world by the *combined* staffs of The Fluor Corporation, Ltd., in the United States and Head Wrightson Processes Ltd. in England.

. . . The manufacture and availability in the sterling area of Fluor-designed products including Cooling Towers, both atmospheric and mechanical draft; Fin-Fan Air-Cooled Heat Exchangers; Air-Cooled Mufflers; Pulsation Dampeners and Gas Cleaners.

All Fluor products fabricated by Head Wrightson Process Ltd. will be in strict accordance with Fluor design specifications and will bear the same performance guarantee afforded Fluor products manufactured in the United States. They will be marketed by Head Wrightson Processes Ltd. throughout the sterling area as Fluor products.

A Flexible Agreement... The agreement between The Fluor Corporation, Ltd., and Head Wrightson Processes Ltd., is of such flexibility as to offer the investor a free choice in determining the allocation of available currencies between various phases of a project and in arranging the localization of the engineering and fabrication in the best way to meet attendant circumstances. The most advantageous arrangements, varying from case to case, may be determined during the discussions preceding a contract.

Products and Services offered to the investor under the association between The Fluor Corporation, Ltd., and Head Wrightson Processes Ltd., are payable in some cases entirely in sterling or, in other cases, largely in sterling with a minimum of dollars involved.

FLUOR

BE SURE WITH FLUOR

Detailed information on how this association between The Fluor Corporation, Ltd., and Head Wrightson Processes Ltd. can benefit your particular dollar/sterling investment requirements will be gladly furnished upon request to *either* The Fluor Corporation, Ltd., Los Angeles, California, or Head Wrightson Processes Ltd., London, England.

Designers and Constructors of Refinery, Chemical and Natural Gas Processing Units.
Manufacturers of Cooling Towers, Fin-Fan Units, Mufflers, Gas Cleaners and Pulsation Dampeners.

THE FLUOR CORPORATION, LTD. *Los Angeles 22* • NEW YORK • CHICAGO • BOSTON • PITTSBURGH • TULSA • HOUSTON • SAN FRANCISCO

HEAD WRIGHTSON PROCESSES LTD. TEESDALE HOUSE, BALTIC STREET, LONDON, E.C.1, ENGLAND

on Sec. 20-2s-14w in the Inglewood area. The derrick stands near the corner of La Tijera and Centinela boulevards.

Inglewood Well Flows

Basin Oil Company has scored its 16th well in the Inglewood City field. The well, Inglewood Community No. 14-2 on Sec. 28-2s-14w, came in flowing 185 barrels of 54 gravity oil and 2,400,000 cubic ft. of gas daily through a 15/64-in. bean. Initial water cut was about 30 per cent. With completion of No. 14-2, Basin Oil has developed some 1000 barrels daily of crude oil production from its 16 wells. The company's gas output averages around 19,000,000 cubic ft. a day.

Corona Try Drills Ahead

Airways Petroleum Corporation continues to prospect ahead below 1950 ft. with Santa Anaheim No. 1 wildcat well in the Chino Basin, east of the San Jose and Chino Hills. The derrick stands 3200 ft. south and 3500 ft. west from the northeast corner of Sec. 9-3s-7w, Riverside County. Drill site is midway between the towns of Chino and Corona. Executive officer of the company is Lyle W. Rucker of Los Angeles, a practicing attorney for 32 years. The company's block embraces 4500 acres surrounding the well. In the Orangethorpe area of the county, Orangethorpe Oil Company's Orangethorpe No. 1 on Sec. 28-4s-8w was last reported temporarily idle at 610 ft. Location is 400 ft. north and 405 ft. west from the southeast corner of the section and not far southeast from Elkhorn Petroleum's abandoned Heinlein No. 1. Trebuca Oil Company back in 1930 drilled on the same section to an unproductive depth approximating 4500 ft. The project was given up in hard black shale.

Signal Hill Plant Grows

J. A. Novelli, president of the Ben Hur Refining Company at Signal Hill, has announced that an arrangement has been made with Texas oilmen for immediate expansion of the plant by the addition of a $1,000,000 catalytic cracking process facility. The oil executive said the new facility will be capable of converting 5000 barrels of crude oil daily into high octane aviation gasoline. This will increase the plant's total throughput to 10,000 barrels a day, he stated.

Sunset Ends Negotiations

Sunset Oil Company recently made known that negotiations between itself and the Eagle Oil and Refining Company have been terminated. Discussions whereby Eagle would purchase a controlling interest in Sunset have been going on for some weeks. However, as it stands now, control remains as before in the hands of the heirs of Adolph Ramish and Merchants Finance Corporation.

Coyote Try Digs

Barnsdall Oil's deep test in the West Coyote field is coring ahead at 10,840 ft. Located on Sec. 25-3s-11w, Orange County, the well somewhat higher was delayed by a fishing job.

Newhall Well Going Deeper

Two of the country's business leaders have joined to form the Firedart Oil Company. They are Leonard Firestone, Firestone Rubber Company, and Justin Dart, president of Rexall Drug Company. Their first oil endeavor is a deepening job in the Newhall-Placerita area, exemplified by the Mitchell No. 1 formerly held by Nicholas G. Snyder on Sec. 33-4n-19w. They plan to carry the project on down from present depth of 2840 ft.

Ramona Field Drilling Scene

Drilling is continuing in Southern California Petroleum's Adams-Aguirre No. 111 on Sec. 13-4n-18w in the Ramona field, with tools below 2100 ft. Texaco's Kern No. 33 on Sec. 18-4n-17w is drilling and coring at 2560 ft.

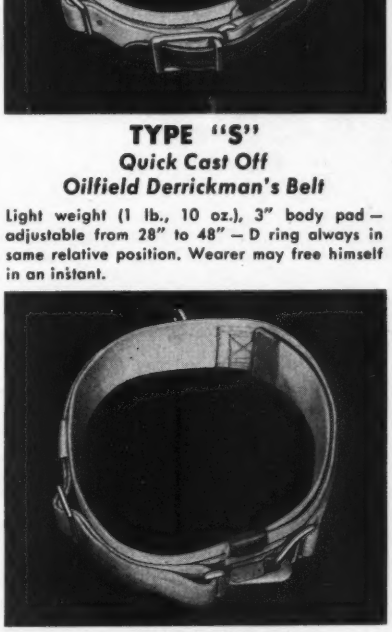
Los Angeles Well Coring

In the East Los Angeles area, Richfield Oil is coring with its Edison U.P. Unit No. 2 at 8000 ft. Drill site falls in Sec. 16-2s-12w.

McDonald
SAFETY BELTS
FINEST MATERIALS
RUGGED CONSTRUCTION
MAXIMUM SAFETY

TYPE "S"
Quick Cast Off
Oilfield Derrickman's Belt

Light weight (1 lb., 10 oz.), 3" body pad — adjustable from 28" to 48" — D ring always in same relative position. Wearer may free himself in an instant.



TYPE "R"
Derrickman's Belt

Wide adjustability — 28" to 48". Light weight (1 lb., 13 oz.).

WRITE FOR CIRCULAR ON COMPLETE LINE OF BELTS

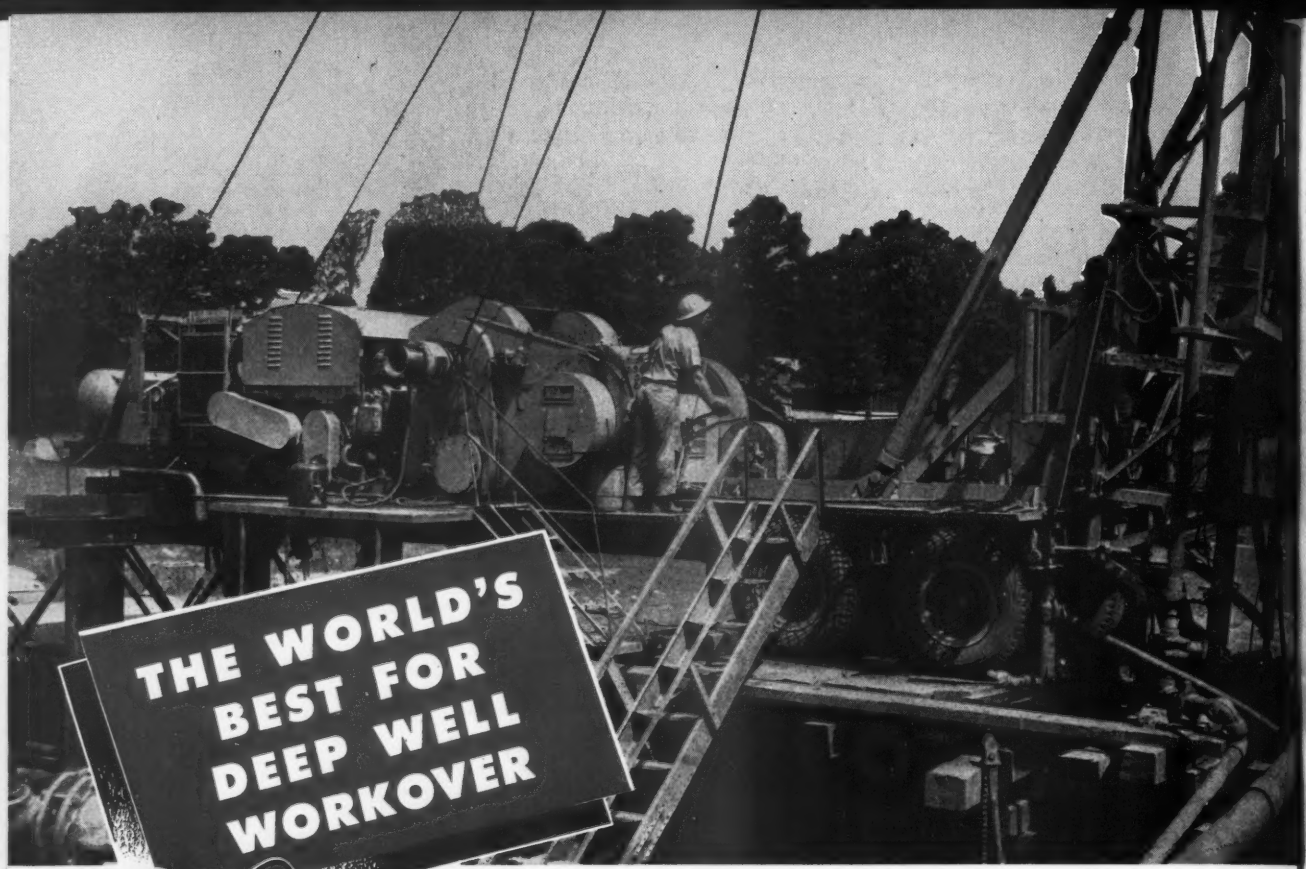
B. F. McDonald Co.

Manufacturers & Distributors of Industrial Safety Equipment

5112 SOUTH HOOVER STREET
LOS ANGELES 37, CALIFORNIA

Safety FROM HEAD TO FOOT

Other Offices in San Francisco & Houston

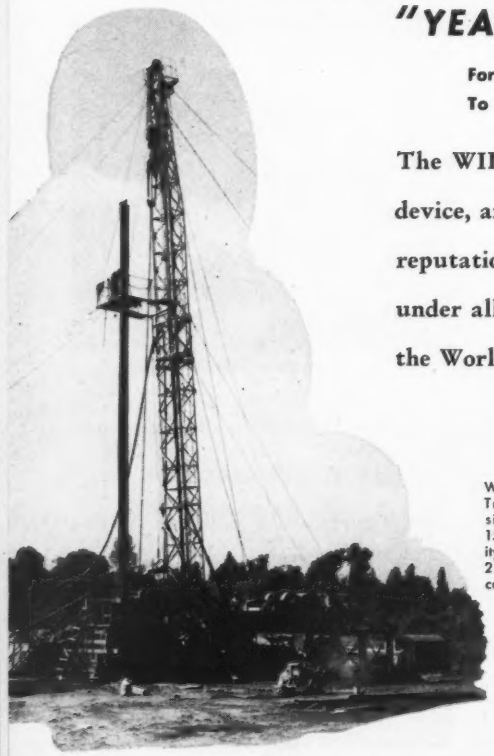


Wilson MOGUL TORCAIR WINCH

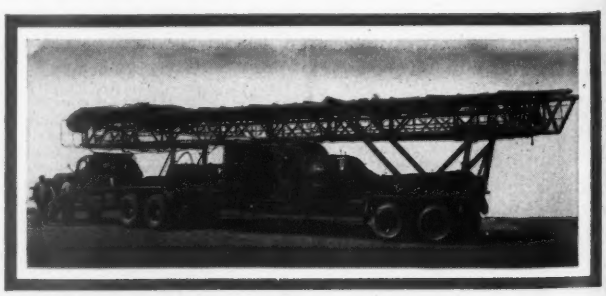
"YEARS AHEAD IN ENGINEERED EFFICIENCY!"

For Servicing Wells to 8,000 Feet with 2½" Tubing, Without Hydromatic Brake,
To 16,000 Feet with 2½" Tubing, with 15" Double Rotor Hydromatic Brake

The WILSON MOGUL TORCAIR WINCH is built to include every safety device, and designed for long, trouble-free life. The Wilson name and long reputation is your assurance of power to spare, with ruggedness to take it under all conditions. Particularly adapted to Portable Rig Operation–Truly the World's Best for Deep Well Workover!



Above: Mogul Torcair Winch owned by Lee and Markham Production Company, Gladewater, Texas. On location for Phillips Petroleum Company, near Tyler, Texas.



Mogul Torcair Winch with Mast on Trailer. Made in two sizes: 90-Ft. height, 158,000-pound capacity; and 90-Ft. height, 260,000-pound capacity.

POWER RIG & EQUIPMENT CO., INC.

5141 Anaheim-Telegraph Road • Los Angeles 22, California

EXCLUSIVE WEST COAST DISTRIBUTOR OF WILSON MANUFACTURING COMPANY, INC.

Coastal and Northern District

Monterey
Test Idle

Drilled to a depth of 1840 ft. in gray sand, the John Stephen Horn T-A No. 1 on Sec. 35-15s-1e in the Monterey area of Monterey County is temporarily suspended.

Paso Robles
Test Drills

C.C.M.O. Company is prospecting on down in hard shale at 3000 ft. with its Peterson No. 1 wildcat well on Sec. 11-27s-13e at Paso Robles, San Luis Obispo County. Mar-Roo Syndicate is rigging its Lampman No. 1 on Sec. 26-28s-12e. At Crocker Flat, Continental Oil is drilling chert shale at 6720 ft. with Munsey-USL No. 1 on Sec. 4-32s-22e. Drilling has been suspended at 2205 ft. in the Pago Grande Oil Corporation Pago Grande No. 1 at Atascadero in Sec. 2-29s-12e.

Moody Gulch
Test Drills

In the West Moody Gulch area of Santa Cruz County, Merle W. Wheeler is drilling at 500 ft. with Wheeler No. 1 exploratory well on Sec. 6-9s-2w.

Tehama
Try Quits

About ready to quit slightly below 1500 ft. appears the Marker Foundation, Inc., Marker No. 3 in the Flournoy area in Sec. 22-24n-5w, Tehama County. A fish was not recovered.

San Mateo
Hole Digs

Reports from San Mateo County denoted Pomona Tile Company's No. 1 core hole was drilling near 500 ft. on Sec. 6-9s-2w.

Santa Rosa
Slim Hole Digs

On Santa Rosa Island off the Santa Barbara coast, J. R. Pemberton is drilling at 1210 ft. in Tecolote No. 3, a slim hole. Two wildcats drilled in recent months on the island failed to show commercially. They were sponsored by Signal Oil and Pemberton, respectively.

San Marcos
Test Drills

In the picturesque San Marcos area of Santa Barbara County, Lewis W. Welch is drilling at 4145 ft. with Welch Janeway No. 1 on Sec. 11-6n-28w.

Sespe Creek
Test Working

Down 1375 ft., Sweet Development Company's No. 1 on Sec. 17-5n-19w is busy repairing equipment. The well, in the Sespe Creek area, formerly carried the banner of V. W. Moulton.

Eureka Canyon
Project Tests

Thornbury Drilling Company is testing its Thornbury-Oceanic No. 2 in the Eureka Canyon area on Sec. 33-4n-18w, Ventura County. Total depth is 1616 ft., with casing set at 1600 ft. The well is about 85 ft. higher on structure than the first well, 40 ft. away, which was abandoned at 1723 ft. when the casing set at 1680 ft. collapsed. The company apparently has found a deep structure.

Edna Well
Progresses

In the Edna field, Signal Oil & Gas Company's Signal-Holmes No. 2 is drilling at 1790 ft. on Sec. 6-32s-13e. At Elwood, the company is rigging State No. 208 on Sec. 8-4n-29w.

Goleta Gasser
Good Producer

Pacific Lighting Corporation has finished another excellent producer in the Goleta gas field. It is Miller No. 5 on Sec. 20-4n-28w, which came in from 4315 ft. at the rate of 57,000,000 cubic ft. a day.

Rio Vista
Well Flows

On back pressure test, Amerada Petroleum Corporation's new Hamilton No. 3 well on Sec. 26-4n-2e in the Rio Vista area of Solano County flowed at the rate of 5,710,000 cubic ft. of gas daily. A 5/8-in. bean was in use. The well is bottomed at 4513 ft.

Rincon Jobs
Drill Ahead

In the Rincon field, Ventura County, Fullerton Oil Company is drilling at 2940 ft. in its Hobson State No. 145-5 on Sec. 8-3n-24w. C.C.M.O. Company has three drilling jobs at various operational stages. They are No. B-22 on Sec.

In the Inglewood Field at Standard Oil Company's well LAI No. 4-3, left to right: R. F. Dargatz, derrick; H. Christian, rotary helper; George D. Haddon, driller; Charles L. Pounds, rotary helper, H. R. Torres, rotary helper.

17 and Hobson No. B-140 and No. B-150 on Sec. 16-3n-24w. Richfield, meantime, has completed Hobson State No. F-3 on Sec. 8 for 211 barrels a day from 2717 ft.

Lion Mtn. Jobs Dig

Humble Oil's Berylwood Inv. No. B-1 on Sec. 18-4n-22w at Lion Mountain is drilling at 3175. Theo Hammond No. 2 on the same section has reached 980 ft.

South Mtn. Wells Dig

In the South Mountain field in Ventura County, F. E. Fairfield is drilling at 1640 ft. with L. B. No. 2 on Sec. 20-3n-20w. His Shell-Casperson No. 2 on Sec. 19-3n-20w is making hole ahead at 615 ft. A recent completion on the section is Fairfield's No. 20. It finished at a plugged depth of 5632 ft. for 100 barrels a day initial output.

Bardsdale Job Deeper

Camden Oil Company's Elkins No. 2 well in Sec. 9-3n-19w in the Bardsdale field is digging deeper at 1650 ft. Surface pipe is set at 200 ft.

SEVERNS DRILLING CO.

Arroyo Grande Test Abandoned

In the Arroyo Grande area of San Luis Obispo County on the north flank of the Pismo anticline, C. W. Colgrove has abandoned his Patchett No. 45-33 on Sec. 33-31s-13e. The derrick stood about a mile northwest of the Colgrove McDonald No. 42-5, which was completed some months ago for 125 barrels at a depth approximating 3200 ft. The Patchett venture went to one foot short of 4700 ft. In the Casmalia field, Richfield has written off its Soladino Fee No. 52 on Sec. 18-9n-34w. Total bottom was 6032 ft., with plug at 4770 ft. The packer failed to hold on test of the interval of 4570 and plug.

Tar Creek Adds Well

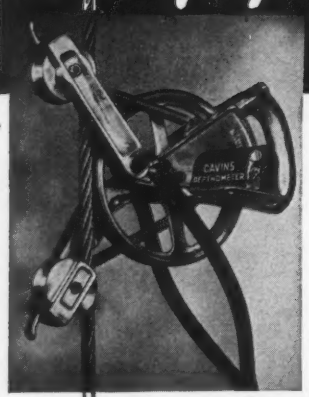
Union Oil has added another producer in the Tar Creek field. It is Tar Creek No. 49, Sec. 28-5n-19w, which finished at a plugged bottom of 653 ft. for 92 barrels a day. No. 51 on the section is drilling at 1500 ft. No. 50 is a location.

Ventura Avenue Well Under Way

On the Hartman lease in the Ventura Avenue field, British American Oil Producing Company's No. 17 on Sec. 11-3n-23w has reached 100 ft. and is continuing to drill deeper. Shell Oil has completed Edison No. 50 at 11,370 ft. for 720 barrels a day.

YOU HAVE TO BE BEST TO BE FIRST AND CALIFORNIA OIL WORLD IS THE FIRST IN THE WEST.

Why Guess ABOUT WIRE LINE MEASUREMENTS?



- Easy to Carry
- Direct Reading
- Quickly Put on Line
- Accurate Measurements

The Cavins DEPTHOMETER is a simple, compact, direct-reading device that obsoletes "stringing-in" and gives you accurate measurements in very little more time than it takes to make a trip with your bailer. Comes in a handy carrying case (weighs only 17 pounds)—readily taken to any well—put on the line in a few seconds—priced to pay for itself quickly.—Write for illustrated folder.

THE CAVINS CO.
2853 Cherry Ave., Long Beach 6, California

CAVINS DEPTHOMETER

"Pipe dreams" come true

Installing pipe lines quickly and economically in the face of today's high costs can be a reality—not just wishful dreaming—by using ARMCO Welded Steel Pipe. This is why...

ARMCO Pipe although amply strong is light in weight. Long, 40-foot lengths are easy to handle and assembly goes fast. Accurately beveled ends simplify field welding.

Diameters of ARMCO Steel Pipe range from 4 to 24 inches, with gages from No. 14 to No. 3. You can match exact job requirements—save time, money and labor. Write for data.

ARMCO DRAINAGE & METAL PRODUCTS, INC.
CALCO DIVISION
2610 Seventh St., Berkeley 10, Calif.
6155 S. Malt Ave., Los Angeles 22, Calif.

ARMCO WELDED STEEL PIPE

San Joaquin Valley

McKittrick Fossil Find

Los Angeles County fossil hunters have made a revealing discovery of past life in the McKittrick area of Kern County. They uncovered bones of a variety of prehistoric animals, including skeletons of mastadons, ground sloths, peccaries and an Ice Age horse. Also found were the bones of a so called stilt-legged camel, which scientists reckoned may have stood almost 20 ft. high. This is more than twice the height of the ordinary camel as known today. An extinct musk ox found is of a type never unearthed before in the area. McKittrick asphalt evidently has given up a greater variety of bones than did the tar pits in Rancho La Brea, Los Angeles. It may be that the deposits in Kern County may at last provide the missing link between the later Ice Age and the present. The fossil discovery recalls a find in 1860 when workman brought to light some huge bones at McKittrick. These tar-coated fossils were used for months as camp fire fuel.

Bacon Hills Test Coring

About five miles west of the South Belridge field, R. E. Bering and the Mitchel Company are coring oil sand below 1200 ft. in their Bacon No. 1 in the Bacon Hills area, Sec. 35-28s-20e.

Jasmine Test Idle

Idle at 2872 ft. is the current status of the H. A. Conway Quinn No. 1 on Sec. 15-25s-27e in the Jasmine area of Kern County.

Paloma Try Digs

A half mile southeast of the present production limits of the Paloma field, Humble Oil and Refining Company is drilling at 10,540 ft. with No. 41-18 on Kern County Land Company ground in Sec. 18-32s-27e.

Raisin City Well Interests

Of more than ordinary interest is the Northwest Syndicate and British American Oil Producing Company's new well on Sec. 10-15s-16e in the Raisin City area, Fresno County. The well is on a total of 740 acres held by the two companies. It is putting out 145 barrels gross daily through a 10/64-in. choke, cutting 2.4 per cent mud and sand. Crude is of 22.5 gravity and tubing pressure 350 pounds. The new producer is about a quarter of a mile northwest of the KRD Syndicate's No. 1 well, which was finished as a successful extender of the Raisin City field in June, 1946. The new well, called KRD No. 33-10, is three-quarters of a mile in the same direction from L. M. Lockhart's No. 2 producer at old Raisin City. The KRD No. 33-10 drilled to 6375 ft. before plugging back to 5208 ft. Interval open to production is from 4991 to 4995 ft. The combination of drilling interests may have found a new pool separate from the Raisin City field. Sands throughout the entire area are characteristically lenticular and further geological studies are probably called for to determine accurately true significance of the new well. Company engineers, Kemnitzer, Richards and Diepenbrock, also share interest in the well. Coast Exploration Company and Von Glahn Oil Company are fishing with Ripperdan No. 81-24, after redrilling to 4300 ft. on Sec. 24-15s-17e. The hole was carried first to 5265 ft.

Firebaugh Test Drills

Four miles west of Firebaugh, C. W. Colgrove is drilling ahead at an inconclusive depth with his Hotchkiss No. 15-2 on Sec. 2-13s-13e, Fresno County. Colgrove's 8000-acre lease is out of an 18,000-acre lease block held by Severns Drilling

At Santa Fe Springs at The Texas Co.'s Standee Lease well No. 3, O. B. Grave, head well puller, E. L. Horner.

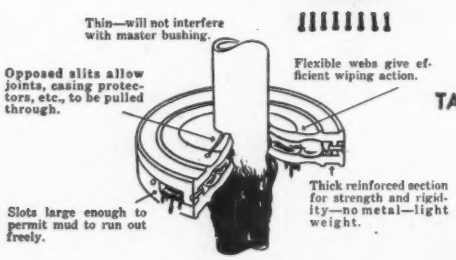
Clean Pipe

WITH THE

TANDEM Pipe Wiper

Patterson-Ballagh announces the new, field proven TANDEM Pipe Wiper. Easier to install than two single pipe wipers, this efficient TANDEM will wipe your drill pipe *clean* no matter how *fast* you come out of the hole.

REPLACEABLE HALVES FOR ECONOMY— Identical halves and light hard rubber pins make up the TANDEM. Should either half become worn, only that half need be replaced. Each replacement half supplied with new pins. Halves easily assembled into rigid unit.


Thin—will not interfere with master bushing.
Opposed slits allow joints, casing protectors, etc., to be pulled through.
Flexible webs give efficient wiping action.
Thick reinforced section for strength and rigidity—no metal—light weight.
Slots large enough to permit mud to run out freely.

TANDEM WIPER FOR EFFICIENCY— Any mud the lower wiper misses, the upper wiper is sure to get. Wipers are spaced far enough apart to prevent mud caking, yet close enough so there is no interference with master bushing.

For top pipe wiper performance, use the new Patterson-Ballagh TANDEM on your rig. For more information, write for Bulletin No. 2-48.

Specify

PATTERSON-BALLAGH

DIVISION OF BYRON JACKSON CO.

22 Years of Service to the Oil Industry

PATTERSON BALLAGH · SEAL OF QUALITY · OIL FIELD SPECIALTIES

TANDEM PIPE WIPERS

MAIN OFFICE: 1900 EAST 65th STREET, LOS ANGELES 1, CALIFORNIA

6247 Navigation Blvd., Houston 11, Texas • 808 Graybar Bldg., New York 17, N. Y. • 330 Russ Bldg., San Francisco 4, Calif.

T.I.P.S.A., Santiago Del Estero 286, Buenos Aires, Argentina

Company. The Colgrove lease runs to within three miles of the east border of Fresno County and is situated in the southern part of the county, 18 miles northwest of the Helm field. The whole lease is a dozen miles long and three miles wide and mainly between Dos Palos and Mendota. A wildcat well drilled some years ago near Firebaugh cored several hundred feet of Eocene formation, but failed to produce. Elsewhere in Fresno County, Barnsdall Oil's J. M. & R. No. 1-28 on Sec. 28-19s-16e at Amerada Nose is drilling at 9130 ft. Western Gulf's Lillis No. 22-4 at Cantua Creek on Sec. 4-27s-14e has been abandoned at 4656 ft. Texas Company, likewise, has abandoned Raaths No. 1 at Jacalitos Front in Sec. 30-21s-16e. Superior Oil's SPL No. 48-23 at North Coalinga was a production failure to 10,595 ft. on Sec. 23-19s-16e.

Land Company Income Rises

The royalty income of the Kern County Land Company still trends upward. The company reports that the first eight months of this year oil and gas royalties totaled $11,730,542. In the same period of 1948 they were $10,760,075. August royalties were $1,522,918. Last year for the same month they were $1,342,258.

Cuyama Valley Well Completed

F. C. Griggs & Associates has completed Norris No. 3 on Section 25-11n-28w in the Norris sector, the scene of the first oil found in Cuyama Valley. The well came in from a plugged depth of 3420 ft. flowing 250 barrels of 34.5 gravity oil and 100,000 cubic ft. of gas daily. The project was drilled to 4115 ft. before plugging back. The Colgrove sand was evidently absent and the Dibblee zone taken in for production.

Mojave Venture Bails But Water

Paul Beamer's No. 1 in the Mojave area, which was drilled to 1930 feet and bailed water, may be abandoned and another test well undertaken in the area by the operator. Location is in Sec. 2-32s-36e. Newton Oil Company has staked Oswald No. 1 in Sec. 12-11n-12w.

Lost Hills Try Digging

On Sec. 11-26s-20e in the Lost Hills area, General Petroleum's Williamson No. 33-11 has reached 5116 ft. The 13⅜-in. pipe was cemented at 4283 ft.

Ant Hill Test Digs

On wildcat ground southeast of the Ant Hill area, Kern Oil Company at last reports was drilling at 2135 ft. in Bloemer No. 75 in Sec. 26-29s-29e.

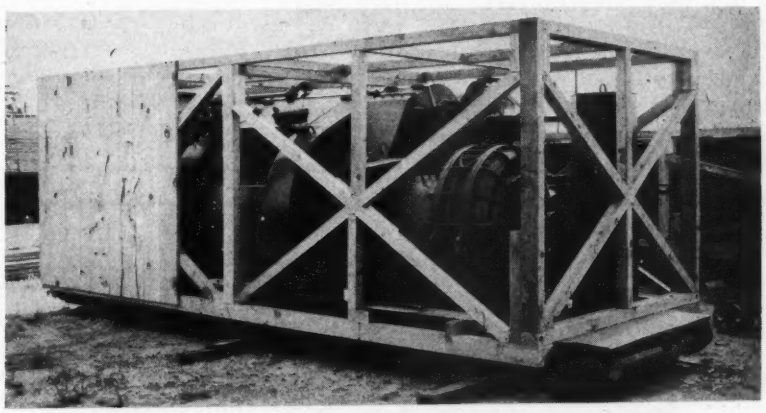
Edison Area Active Center

Rothschild Oil Company's new Giumarra No. 1 on Sec. 22-30s-29e, between West Edison and the Edison field proper marks an interesting development. Representative gauge of the well's capacity was not available at this writing, but it appears as a possible dual zone discovery in the area. Taken in was saturated oil sand in the Chanac from 2476 to 2550 ft. and Santa Margarita sand of comparable worth in the interval of 2900-2955 ft. The

No Crating Is Better Than the Framing

Specializing in Export Packing of

(No Job Too Small) ***Oil Field Equipment*** **(No Job Too Large)**



Above Shows Skeleton or Framing, All Bolted Construction, Before Waterproofing and Sheeting

WATERPROOFING **RUSTPROOFING** **HEAVY CRATING**
OIL FIELD MACHINERY **BOXING** **GOV. SPECIFICATIONS**
CARGO STORAGE **ACCUMULATING AREA** **DOCUMENTATION**
EXPORT DECLARATION **MARINE INSURANCE**

30 ACRE PLANT SITE

FOREIGN TRADE EXPORT PACKING CO.

445 Figueroa Street **Wilmington, California**
Phone TErminal 4-2612
NEvada 6-2977

well is on the southeast quarter near the center of the section. It is offset by 160 acres held by Mark Morris in the northwest quarter. Universal Consolidated has offsetting property in the southwest quarter. The O. F. Darling McNear No. 1 in Sec. 1-31s-29e at Southeast Edison has been relegated to history, after the hole was redrilled and deepened from 1392 ft. to 2642 ft. Granite was topped at 2625 ft.

Gosford Try Fails

Abandoned at 8974 ft. marked the end of Superior Oil's Neefs No. 54-30 test well in the Gosford area in Sec. 30-30s-27e.

Buttonwillow Test Starting

T. & M. Exploration Company has staked well No. 1, a test 330 ft. north and east from the southwest corner of Sec. 26-29s-22e in the Buttonwillow area.

JEL-OIL

JEL-OIL OIL MUD PROVIDES

A completion mud which permits no water to enter the producing formation.

Exceptionally low filter loss under all drilling conditions.

Proper easily controlled Jel strength and good suspension.

BROWN MUD COMPANY

COMPLETE DRILLING MUD SERVICE

AUTHORIZED MAGCOBAR DEALER
DAY and NIGHT SERVICE

MAIN OFFICE
4606 W. 18th St.
LOS ANGELES 6, CALIF.
YORK 7494 — WY 6133

VENTURA Miller 3-8168

BAKERSFIELD 2-6410

Johnston Stainless Welding Rods

PROVEN QUALITY SINCE 1931

A. P. JOHNSTON

1845 E. 57th St. - Los Angeles 11, Calif.

Devils Den Test Cased

Tritex Oil Company is in the completion stage with its Tritex-Porter No. 1 test on Sec. 16-25s-18e in the Devils Den area, after running and cementing casing in the project. Total depth is 3583 ft. At South Devils Den, Universal Consolidated is coring grey sand around 5800 ft. in its Beer No. 1 on Sec. 9-26s-19e. The company's Bramlette No. 1 a wildcat on Sec. 34-26s-18e at Shale Hills, is drilling at 2015 ft.

Arvin Test Oil Failure

Redrilled to 6790 ft. and with top of a fish at 5452 ft., Union Oil Company has pulled out of its Jewett No. 15-23 on Sec. 23-31s-29e at Arvin, Kern County. Original bottom is 7408 ft.

Porterville Wildcat Digs

In the vicinity of Deer Creek near Porterville, Hudson Oil Company, Inc., is drilling below 2800 ft. with Hudson-Fay No. 1 explorer in Sec. 24-22s-27e, Tulare County.

Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

WYOMING

Production in Wyoming's biggest field, Elk Basin, may be boosted to around 25,000 barrels per day when the two new refineries at Billings, Mont., are operating on full stream. The northwestern Wyoming field, largest reserve developed during the war years, is now turning out around 14,000 barrels daily of 30 gravity black oil. Petroleum engineers familiar with its reservoir and gas-oil ratios say it is capable of turning out around 25,000 barrels per day under the unitized plan of operation.

Both Carter and Continental, builders of the new "cat crackers" in Billings, have operating interests in the Elk Basin unit, of which Stanolind Oil and Gas Co., is unit operator. Stanolind has another large financial stake in the field: the new gasoline plant and sulphur extraction process which started operating last spring.

In order to repay the substantial investment for this plant, production at Elk Basin probably will be increased materially. The field is expected to weather the current period when most black oil fields are cut back sharply due to the problem of residuals piling up at older refineries.

Both new refineries at Billings are designed to operate on heavy black crudes. The residuals are used for heating requirements of the plants, such as heating crude oil before it enters the cracking process. Should the market for fuel oil and heating oil improve in the future, natural gas could be used for refinery heating purposes, and the heating oils sold on the market. This factor of flexibility is important in the light of the fact that the Billings plants must operate for the most part on heavy black crudes from southern Montana and northern Wyoming fields.

Refining capacity in southern Montana holds the key to future development of the black oil fields in northern Wyoming. The combined capacity of all refineries in this region is estimated at around 50,000 barrels per day.

This is broken down as follows:

Carter, Billings, 18,000 bbls. per day, crude run.

Continental, Billings, 8,000 bbls.

Farmers Union at Laurel, Mont., 10,000 bbls.

Husky refinery, Cody, 5,000 bbls.

Ohio Oil refinery, Lovell, 6,000 bbls.

Billings, one of the fastest growing cities in the northwest, has an ideal geographical location as a refining center. It is in the center of a thickly populated irrigated valley, surrounded by large dryland wheat farming areas, and two of its railroads, Great Northern and Northern Pacific, serve nearly four-fifths of Montana's population. A third railroad, the Burlington, taps the rich Big Horn Basin of northwestern Wyoming.

Present potential production of the Elk Basin field is practically on a par with the production from all Montana fields, which is placed at around 24,000 barrels per day.

The new Elk Basin plant, primarily a gasoline plant of the conventional type, also produces sulfur and generates inert gas for injection into the Elk Basin field. The plant produces about 17,000 gallons of gasoline and 39,000 gallons of butane and propane daily. It has a capacity of 12 million cubic feet of feed gas per day.

Gas from the Elk Basin field is about 20 per cent hydrogen sulfide. In the plant, the hydrogen sulfide is extracted from the gas and processed to recover the sulfur. More than 70 long tons of sulfur are produced daily.

Not enough gas is produced from the field to carry out the injection program, so more must be made. This is done by burning natural gas with air. The gas is then compressed to very high pressures for injection.

The development drilling program at the field is practically completed, with only two wells to be put on production by Carter Oil Co. at the present time. Major members of the Elk Basin unit agreement are Stanolind, Continental, Carter, Ohio Oil Co., and the Mackinnie Oil and Drilling Co.

While the market for Elk Basin crude is assured by new refinery expansion at Billings, other black oil fields in northern Wyoming are counting on a share of this new business as well as an improvement in demand for heating oils and fuel oils to recover some of their shut-in production. Seaboard Oil Corp.'s new field at Silver Tip, west of Elk Basin, which produces high gravity light oil with a high hydrogen sulfide content, is also seeking a better market.

Wyoming's second largest field, Salt Creek, long the leading light oil producer in the Rocky mountain region, is currently pumping around 10,000 barrels per day of light crudes which find a ready market through Casper refineries.

Only 14 miles north of Salt Creek, a promising new light oil field is being developed rapidly by Continental Oil Co., at the Sussex unit in Johnson county. The most recent well, No. 8, was brought in for 720 barrels per day, through one-half inch choke, in mid-October. Production from the field is running around 1,000 barrels per day, with five wells producing from the La-

10 GOOD REASONS WHY OPERATORS PREFER

McCullough
GUN PERFORATOR SERVICE

1. **MEETS EVERY CONDITION.** Guns fired either electrically or mechanically: guns run on cable, sand line, drill pipe, tubing, or on piano-wire measuring line in extremely high-pressure wells.
2. **SIMULTANEOUS FIRING** under all conditions gives exact spacing of shots, perfect perforation pattern, and saves down-the-hole time.
3. **ACCURATE DEPTH MEASUREMENTS** put the shots right where you order them.
4. **MAXIMUM PENETRATION** of bullets into the formation, as proved repeatedly in competitive field tests.
5. **GUNS TO FIT EVERY CONDITION.** McCullough employs more than 30 different types and sizes of guns.
6. **ALL SIZES OF BULLETS** from ½" dia. up to ¾" dia., to fit every possible need.
7. **BURRLESS BULLETS,** giving a completely burr-free hole, eliminating casing scraping, with *no* sacrifice of penetration.
8. **NO LOST TIME.** McCullough's simpler, lighter equipment cuts setting-up and moving-out time, speeds up every job.
9. **EXPERIENCED MEN.** With years of experience behind them, thoroughly-trained McCullough gun-perforating crews do their jobs quickly, efficiently, safely.

These Are Some of the Reasons Behind the Proven Fact That
McCullough
PUTS THE SHOTS WHERE THEY COUNT!

10 This is a section of a McCullough **90-SHOT GUN** perforating a 15-foot section with 6 holes to the foot, at one run.

McCullough TOOL COMPANY
5820 South Alameda St., Los Angeles 11, California
405 McCarty Avenue, (P. O. Box 2575) Houston, Texas

31 SERVICE LOCATIONS

TEXAS: Alice, Houston, Cisco, Corpus Christi, McAllen, Odessa, San Angelo, Tyler, Victoria, Wichita Falls. OKLAHOMA: Oklahoma City, Guymon, Healdton. MISSISSIPPI: Laurel. NEW MEXICO: Hobbs. KANSAS: Great Bend. CALIFORNIA: Los Angeles, Avenal, Bakersfield, Ventura. MONTANA: Cut Bank. LOUISIANA: Houma, Lake Charles, New Iberia, Shreveport. WYOMING: Casper, Cody. CANADA: Edmonton. VENEZUELA: United Oilwell Service Co., S. A.: Caracas, Anaco, Maracaibo.

EXPORT OFFICE 30 Rockefeller Plaza, New York 20, N. Y.

kota sand around 7,000 feet and two wells getting pay in the Shannon sand around 4,500 feet. Commercial shows have also been logged in the shallower Sussex sand at around 4,000 feet. One well, drilled through the Lakota, was a dry hole. The Second Wall Creek sand, which was so prolific in nearby Salt Creek, is either dry or water-bearing in the Sussex field.

Continental geologists indicate a deeper test may be drilled to the Tensleep or Madison formations next year. The field was discovered in August, 1948, and a pipeline has just been completed by Stanolind to connect with the Salt Creek system. The oil averages 42 gravity and is green in color.

South of the Sussex unit, American Liberty Oil Co. of Dallas has abandoned a Lakota test at 8205 feet on a farmout from Sinclair Oil and Gas Co., and is testing another wildcat in the Shannon. The firm has also started another Lakota test in this area to the south.

The Sussex area so far is the most encouraging development along the west side of the vast Powder River Basin since the war. Another new field southeast of the Teapot Dome area in Natrona county is also meeting with moderate success. This is Amerada's Sage-Spring creek unit, whose discovery well is now pumping 135 barrels per day of 35 gravity oil from Dakota sands. A second well is being completed for somewhat better production, tools are being moved to a third close offset, and a location has been made for a semi-wildcat two miles south of the discovery. The new location is in section 7-36n-77w, and will be watched closely for an indication of the extent of the field, which lies about 30 miles north of Casper.

Recent events north of the Sussex field, in Johnson county, have been discouraging. Amerada has just abandoned its deep Powder River Basin test at Reno hill at a total depth of 12,610 feet, without finding any shows. Second Wall Creek was logged at 12,553 feet. Earlier Amerada abandoned another 12,500 foot test at Smith Cut, and last summer Shell abandoned deep tests at Clear Creek, in Sheridan county, and at Ash Creek in Big Horn county, Montana—both on the west side of the Basin.

Phillips Petroleum turned the spotlight again on the southeast corner of the Powder River Basin when its No. 3 well in the new South Cole Creek field was completed recently for 532 barrels per day of 35 gravity oil, through ¾-inch choke. Development in this field has stimulated leasing and drilling in Converse county. Steelco Drilling Co. of Houston is now drilling a 6,000-foot test on the north outskirts of the town of Glenrock. The wildcat is surrounded by Phillips' leases, including even town lots, and the outcome is being watched with a great deal of interest in central Wyoming.

Drilling efforts along the Wyoming-Idaho line in Lincoln county were doomed to disappointment as Continental prepared to abandon its second venture west of the town of Afton. The venture ran into 77 degree dips after drilling below 7,000 feet. Continental's first venture in the area was abandoned after finding steep vertical dips, and Shell had a similar dry hole venture in the area.

Another deep failure was listed for southeastern Wyoming when a joint venture by Joe Bridwell of Wichita and Seaboard Oil Corp., was plugged at a total depth of 9980 feet in Lakota sands. The well logged slight saturation in the upper part of the Muddy sand formation, but failed to yield on drillstem tests. It was located a few miles to the east of General Petroleum's Horse Creek field, which has developed substantial production from the Muddy sands around 4,500 feet.

The California Co. is moving in equipment for a second well in the new Borie field about eight miles west of Cheyenne. A close offset to the discovery (about 1,300 feet), it expects to find the Muddy sand around 8400.

Bay Petroleum Corp. of Denver has made location for a 10,500 foot Lakota sand test in the Wallace Creek area on a farmout from Superior Oil Co. The venture in section 15-34n-87w will probe the center of a 9,000-acre block of acreage and rates as one of the most important Wind River Basin tests launched this year. About 20 miles to the north, Pure Oil Co. is drilling around 11,000 feet at the deep Badwater test, which may approach the firm's deep producer at West Poison Spider (14,309 feet).

You can be sure with a JENSEN

What does a producer expect from a modern pumping unit?

Of course, we can't speak for all, but most of our friends give theirs like this: reasonable purchase price, proven design, rock-bottom operation and maintenance costs, dependability and long life.

And these are the things that have been built into Jensen units for 30 years. They are the things that make every Jensen owner SURE he is getting the most from his pumping unit money.

Before you invest another cent in pumping units, check on Jensens; it's easy to "bet" on a sure thing.

Stocked by

THE OIL TOOL CORPORATION

3075 Cherry Ave., Long Beach, Calif.

Phone 481-81

JENSEN

BROTHERS MFG. CO.

COFFEYVILLE, KANSAS, U.S.A.

EXPORT OFFICE: 50 Church St., New York City

GENERAL

With completion of two new fluid catalytic cracking plants at Billings and a big expansion program under way at Salt Lake City, the refining industry is prepared to meet the needs of the Rocky mountain region for at least the next 10 years.

In the Huntington Beach field, at Southwest Exploration Co.'s well State B-22, left to right: G. G. Giddess, piperacker; J. L. Handley, cathead; Claude Keller, lead tong; Lloyd Johnson, driller.

That is the considered judgment of J. A. Lentz of Denver, western sales manager for Continental Oil Co., and formerly with the Petroleum Administration for War in the Rocky mountain region.

Based on a demand of 67,000 barrels of motor gasoline per day in 1948, the five Rocky mountain states of Montana, Wyoming, Colorado, Utah and Idaho require processing of approximately 170,000 barrels per day of crude oil at refineries.

Refining capacity in the region was estimated by Mr. Lentz at roughly 220,000 barrels per day. The industry currently is processing around 180,000 barrels per day. The population and industry of the Rocky mountain region will have to grow substantially to absorb this unused refining potential, and indications are that no new major plants will be built for at least the next few years. The new catalytic cracking plants have a further advantage in that they can operate for a year without shutting down, and this factor adds to the average volume of refinery crude runs.

Present potential production of fields in the mountain states continues to run ahead of refinery requirements, leaving a surplus for export by pipeline to other areas. The current potential under conservative production rates is estimated at 251,000 barrels per day, with Wyoming contributing 160,000; Colorado 65,000, Montana 24,000 and Utah 2,000 barrels. Wyoming's actual production is running about 130,000 barrels, with some 30,000 barrels of heavy black crude shut in at the wells for lack of a market.

With Rocky mountain refiners taking about 180,000 barrels per day, this leaves a current surplus of 70,000 barrels for export or cutbacks in production. It is estimated that about 38,000 barrels daily are shipped by Stanolind pipeline to Whiting, Ind., and about 5,000 barrels per day are shipped by rail to Spokane.

Wyoming crude largely supplies requirements in southern Montana, Wyoming and eastern Colorado, while the output of Colorado's huge Rangely field on the western slope is pipelined to Salt Lake City. Rangely's production, about 55,000 barrels per day, will go for the most part to refineries in the Salt Lake area, including Utah Oil Refining (Stanolind), with a capacity of 27,000 barrels daily; Salt Lake Refining (Standard of California), 25,000 barrels, and Wasatch (Phillips), about 5,000 barrels. Standard of California is building a products line from Salt Lake City to Boise, Idaho, which will be extended later to the Spokane area.

An interesting point which gave rise to the new products pipeline was the effort earlier this year of the Union Pacific railroad to secure lower freight rates for shipments of oil products from Salt Lake to Boise and Spokane. This move was opposed by barge interests on the Columbia river, with the result that the FPC declined to lower the rail tariffs. Thus the pipeline project came into being, competing with both the rail and barge transportation.

HORNKOHL LABORATORIES

Chemical consultants in Petroleum Production, Testing & Core Analyses.

Bakersfield, Calif. 714 Truxtun Ave. Telephone 8-8567

FOR SALE

40 acre lease ¾ of a mile northwest of Richfield Brady Estate Well #1. Now drilling in Section 13, T3N, R17W, in Aliso Canyon area, Los Angeles County. Box 26. c/o Calif. Oil World 10/20b

SMITH - EMERY CO.

Since 1904

Oils Tested

Shipments Certified

Tanks Strapped

Offices and Laboratories

920 Santee St.

Los Angeles

Compressible Valve Lubricant Announced

The Nordstrom Valve Division, Rockwell Manufacturing Co., announces the development of a valve lubricant which functions in a manner to eliminate the necessity of frequent valve re-lubrication. The product has been named Hypermatic, and is reported to be the development of George F. Scherer, research engineer in the Nordstrom Laboratory. A novel property claimed for the new valve lubricant is its ability to automatically maintain sealing surfaces in a manner different than standard lubrication applications. The lubricant is said to perform well under most conditions up to 250°F.

George F. Scherer, Research Engineer, Nordstrom Valve Division, Rockwell Manufacturing Co., developer of Hypermatic non-compressible, self-sealing plug valve lubricant.

Basically, the manufacturers claim, Hypermatic is similar to standard, non-compressible materials in its lubricating properties and wetting action. It is available in stick or bulk, just as standard valve lubricants. The principal difference between the new lubricant and standard types, the manufacturer explains, is in the way it behaves under working conditions. It is claimed that the new lubricant flows into voids and maintains an unbroken film surface. When it comes to rest, as when a valve-turning is complete or any void is filled, the lubricant again assumes its plastic form with lubricated surfaces sealed.

A descriptive bulletin on the new valve lubricant is available from the Nordstrom Valve Division, Rockwell Manufacturing Co., 400 North Lexington Ave., Pittsburgh 8, Pennsylvania.

Graver Issues Technical Report

The second edition of a technical report on "Evaporation Losses From Cone Roof Tanks" by R. C Ulm, of the Graver Research and Development Department, will soon be released. This paper was originally printed October 8, 1946.

Mr. Ulm's discussion covers vapor concentration in cone roof tanks, breathing losses, and filling losses with a summary of conclusions. The book contains formulae for figuring vapor concentration and losses and includes graphs and photographic illustrations.

Copies of this reprint edition are available on request to Graver Tank & Mfg. Co., Inc., East Chicago, Indiana.

Semi-Selective Shaped-Charge Perforator

Lane-Wells Company, Los Angeles, California announces the introduction of semi-selective guns for its Koneshot Perforating Service. The new 48-shot, F-2 guns, which have been undergoing successful field tests for several months, are now available at most of the company's fifty operation locations.

The new equipment consists of two guns connected by a special sub which makes it possible to fire each gun separately. This combination enables the operator to fire up to forty-eight shots on a single run in the well, with one-half of the shots in one zone and one-half in another zone.

Although two twenty-four shot guns are usually used with the F-2 equipment, guns with a smaller number of shots may be used where only a limited number of perforations are desired in each zone. The versatility of the new equipment makes it possible for the operator to approach the selectivity of bullet perforating equipment and yet have the advantages of shaped-charge perforating.

BJ Announces Wide-Face Casing Tong

The New BJ wide-face casing tong was engineered and designed with the safety of the casing and casing crew in mind. It is light in weight and fits perfectly because it

was designed for casing only. Made in individual sizes to handle 4½" to 11¾" casing and couplings, the BJ wide-face casing tong eliminates casing failures. Flattening, crimping and bottle-necking of thin-wall casing are eliminated due to the wider face and true bore.

Ready for shipment to producers.

Oil Base, Inc., Introduces New Mud-Weighing Material

Oil Base, Inc., announces the availability of an improved **OB Hevywate** mud-weighting material manufactured from a high-purity barytes deposit located in Lower California. Mud-weighting material must have a high specific gravity and be ground to the proper mesh. OB Hevywate will meet field requirements, the manufacturer states.

The product is described as white in color, contains no water-solubles, and is ground 99% through 325 mesh. It is sacked in 100 lb. sacks; and is warehoused at Ventura, Bakersfield and Compton. The product is also marketed in Rocky Mountain territories, and for export.

Lane-Wells Wins Advertising Award

Chosen as one of the most outstanding campaigns in the United States or Canada, the direct advertising campaign of Lane-Wells Company was voted "Best of Industry" in the oil-tool classification by the board of judges at the 32nd annual convention of the Direct Mail Advertising Association in Chicago, according to Frank Frazier, Executive Director, in a letter to Jas. D. Hughes, sales-manager of Lane-Wells. Thousands of entries from every type of industry were submitted and competition was the keenest in history.

The Lane-Wells exhibit included their publications, "Tomorrow's Tools—Today!", "Lane-Wells Cablegram", and the "Round Table", bulletins, catalogs, stockholder reports, and other direct mail pieces.

BJ Super-Triplex Hook Bulletin

Complete information on the BJ 4300, 4200, 4125 and 460 super-triplex hooks is contained in the new BJ Hook Bulletin No. 1003. Parts drawings and dimensions callouts highlight the bulletin together with parts lists and general information on each BJ hook.

U. S. Senator Bert Henry Miller, Democrat of Idaho, died of a heart attack at his Washington home. Miller was elected to the Senate last November. Miller's death may mean the loss of another seat for the party, since Idaho's Governor C. A. Robins, who will name a successor is a Republican. This would leave the Democrats with a margin of 52 to 44.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233)

Of California Oil World published twice monthly at Los Angeles, California for October 1, 1949.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles 5, Calif. Editor, Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles 5, Calif. Managing Editor, None. Business Manager, Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles 5, Calif.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Petroleum Publishers, Inc., 706 So. Valencia St., Los Angeles 14, Calif. M. Kinzie Miller, Jr., 195 So. Grand Ave., Pasadena 2, Calif. Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles 5, Calif.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

WALTER C. MONROE
(Signature of editor.)

Sworn to and subscribed before me this 6th day of October, 1949.

(SEAL) BERTHA EICHEL

(My commission expires November 28, 1952.

San Benito Tests Work

At Vallecitos in San Benito County, C. W. Colgrove is coring at 2200 ft. in No. 5 on Sec. 9-17s-11e. The Rowell, Corwin & Smith Rowell-Government No. 1 on Sec. 18-16s-11e has been given up around 600 ft. In the Hollister area, Fairview Exploration Company has abandoned at 1100 ft. No. 1 on Sec. 22-11s-5e. Regent Oil's Baumgartner No. 2 on Sec. 26-17s-9e near the town of San Benito is making hole at 4760 ft.

Sherman Minton has taken the oath as a Justice of the U.S. Supreme Court. Minton, a former Democratic Senator and "New Dealer" from Indiana, was sworn in by Chief Justice Vinson.

Edmond M. Hanrahan has resigned as chairman of the Securities and Exchange Commission. President Truman nominated Edward T. McCormick of Arizona to the remainder of Hanrahan's term as an SEC member.

Lane-Wells Expands Facilities

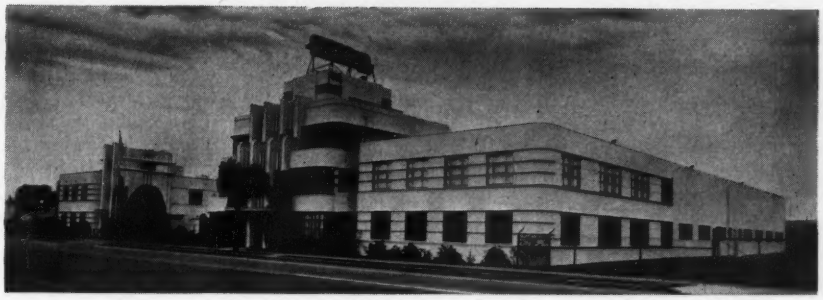
Lane-Wells Company, supplier of technical oilfield services, is nearing completion of an extensive program of expanding and improving plant and branch location buildings in six states. This program, including new construction and improvements on existing facilities, involves twenty-six locations. The purpose of the program is to provide more efficient and faster customer service from every element of the company organization — from the factory through the local branch office.

Two new factory buildings with a total floor space of more than 23,000 square feet have been added to the company's main plant in Los Angeles. One, a machine shop, was built adjoining the existing machine shop facilities to increase the production of packers and bridging plugs as well as guns and other equipment manufactured for use in the company's service operations. The second building is a now 12,000 square foot truck and paint shop where the massive field trucks, offshore skid units, and export service units will be built and finished.

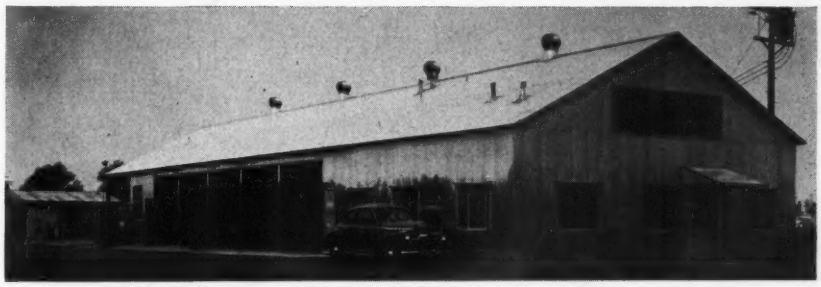
The Pacific Coast Division Headquarters, formerly located with the company's Head Office in Los Angeles, has been moved to attractive and efficient new installations in Paramount, California. Special purpose buildings have been built for truck maintenance, storing and handling explosives, administrative offices, and stock storage.

New or improved branch office and shop building have been built at Bakersfield, and Ventura, California; Alice, Victoria, Odessa, Lubbock, San Angelo, Colorado City, Athens, Beaumont, and Jacksboro in Texas; Hobbs, New Mexico; Magnolia, Arkansas; Lake Charles, New Iberia, and Harvey, Louisiana; and Healdton, Lindsay, and Oklahoma City, Oklahoma.

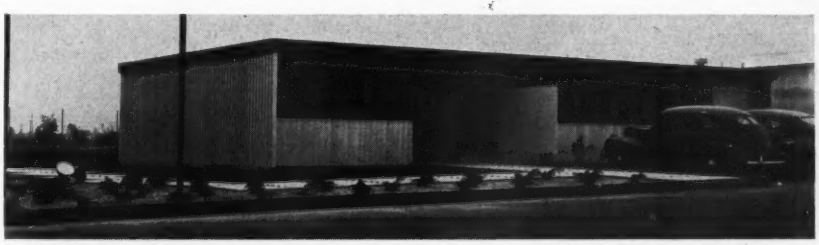
At most locations the new installations include separate, specially engineered loading and storage facilities for Koneshot charges, guns and equipment. These installations are designed particularly for safe and efficient handling of the high explosives used in this new service.



New addition to Lane-Wells plant in Los Angeles is the Machine Shop building on the right. Second floor of the building houses additional office space and new conference and Board of Directors meeting rooms.

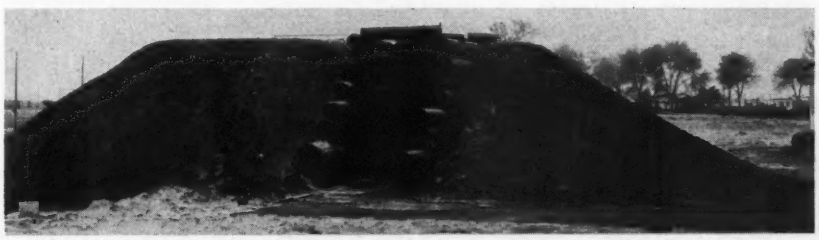


Close-by to Pacific Coast Division Headquarters, the Los Angeles District office and shops give 24-hour service to oil field men in Southern California. New location is considerably closer to the Santa Fe, Signal Hill, Wilmington and Huntington Beach fields.



Pacific Coast Division headquarters are housed in this building. Over-all-administration of Lane-Wells service activities on the Pacific Coast is conducted from this location at Paramount, Calif.

Los Angeles District garage housed in this building keeps the local fleet of Lane-Wells field hoist units in condition to give flawless performance 'round the clock. Koneshot loading building at right.



Built for safety, looking like a front-line command post of the first World War, this arsenal houses the explosives used in Lane-Wells perforating equipment.

California Oil World's Monthly Summary

CALIFORNIA DEVELOPMENT AND PRODUCTION

	AUGUST, 1949, DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 8 Months	Daily Average August 1949	Daily Average August 1948
SAN JOAQUIN VALLEY REGION						
Ant Hill					810	989
Antelope Hills					939	1,177
Bellevue					240	271
Belridge—North	1	1	36	2	3,489	3,488
Belridge—South	4	5	236	69	3,725	8,991
Blackwell's Corner					110	144
Buena Vista				9	35,502	45,123
Calder	2			2	249	
Canal					2,009	1,939
Coalinga Group						
Eastside				16	12,535	19,033
Oil City					82	74
Coalinga—Nose					43,627	53,381
Coalinga—Northeast					5,603	10,299
Guijarral Hills	10	4	2,639	28	9,741	
Pleasant Valley				1	2,773	3,571
Jacalitos	1			7	5,907	6,044
Westside	1	1	31	21	4,565	7,182
Coles Levee—North	1			8	17,348	16,737
Coles Levee—South					2,733	3,086
Edison	3	5	743	36	10,264	11,166
Elk Hills	8	5	3,397	25	7,801	5,489
Fruitvale	2	1	45	11	7,497	6,570
Gosford, East	1	3	534	10	1,353	
Greeley	1			1	12,957	13,929
Helm					2,666	3,094
Kern Bluff	2	5	259	36	2,201	1,678
Kern Front				3	6,841	8,717
Kern River	3	2	16	47	8,241	12,991
Kettleman North Dome	2			2	31,080	34,192
Lanare					1,245	1,238
Lost Hills				6	6,007	8,247
McKittrick Group						
Belgian Anticline				3	1,353	1,053
Cymric				5	8,448	14,580
McKittrick					746	2,744
McKittrick Front					826	2,187
Salt Creek				1	3,958	6,129
Sheep Springs					638	698
Temblor Ranch				1	83	90
Midway-Sunset	2	5	132	58	31,672	41,907
Mt. Poso Group		1	51	8	11,189	12,666
Mountain View				7	3,475	3,367
Paloma	2	3	1,287	11	12,168	12,095
Poso Creek Group				1	1,781	3,613
Pyramid Hills					219	237
Race Track Hill				1	1,841	1,964
Raisin City		2	351	8	3,904	3,188
Rio Bravo					12,019	12,122
Riverdale	1				3,012	3,341
Round Mountain Group				4	6,393	7,431
Russell Ranch	2	6	2,407	71	21,633	2,844
South Cuyama Valley	5	7	6,919	21	4,703	
Strand					692	582
Strand—East					488	435
Tejon Ranch				2	2,218	2,918
Ten Section	1			3	6,589	7,018
Union Avenue					155	222
Wasco					60	152
Wheeler Ridge		1	40	6	767	488
Other Fields	2	5	260	34	2,343	1,199
TOTAL—San Joaquin Valley Region	57	62	19,383	585	393,510	434,110
COASTAL REGION						
Santa Maria District						
Barham Ranch (Los Alamos)						10
Casmalia	1			3	741	1,127
Cat Canyon—East				1	190	548
Cat Canyon—West	1	3	280	18	11,198	17,485
Four Deer	1			1	406	782
Gato Ridge					2,911	3,554

	AUGUST, 1949, DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 8 Months	Daily Average August 1949	Daily Average August 1948
COASTAL REGION—Continued						
Guadalupe	.....	.....	.....	3	59	34
Lompoc	.....	.....	.....	.....	30	6,852
Olivera Canyon	.....	.....	.....	2	.....	867
Orcutt	1	.....	.....	12	4,805	4,588
Santa Maria Valley	.....	.....	.....	4	13,786	19,795
Tinaquaic	.....	.....	.....	.....	36	25
Zaca Creek	.....	.....	.....	5	.....	2,582
Santa Barbara District						
Capitan	.....	.....	.....	.....	1,978	2,378
Coal Oil Point	.....	.....	.....	.....	.....	18
Elwood	.....	.....	.....	2	7,101	7,496
Santa Barbara	.....	.....	.....	.....	43	81
Summerland	.....	.....	.....	1	17	2
Ventura District						
Montalvo West	.....	1	93	3	712	516
Padre Canyon	1	.....	.....	9	7,744	6,500
Rincon	.....	1	144	5	3,492	3,106
San Miguelito	2	1	1,120	8	6,800	5,249
Ventura Avenue	11	8	3,973	46	60,124	52,256
North Santa Clara Valley District						
Del Valle	1	1	81	16	8,895	9,445
Hopper Canyon	.....	.....	.....	.....	168	167
Oak Canyon	.....	.....	.....	.....	1,692	1,996
Ojai Group	2	1	20	11	487	559
Sespe Canyon Group	1	1	151	6	274	189
Temescal	.....	.....	.....	.....	525	563
Others	1	.....	.....	3	73	54
South Santa Clara Valley District						
Aliso Canyon	.....	.....	.....	7	3,676	3,651
Bardsdale	4	2	70	9	1,664	1,038
Newhall-Potrero	2	.....	.....	9	9,011	7,730
Oxnard	.....	.....	.....	.....	368	1,175
Placerita Canyon	7	16	12,774	89	19,759	.....
Shiells Canyon	1	.....	.....	.....	817	945
South Mountain	4	2	216	22	7,452	6,151
West Mountain	.....	1	20	4	701	998
Others	.....	.....	.....	.....	667	975
Miscellaneous	1	.....	.....	36	610	473
TOTAL—Coastal Region	42	38	18,942	335	179,012	171,960
LOS ANGELES REGION						
Brea-Olinda	.....	1	64	14	14,961	15,335
Coyote—East	2	.....	.....	9	4,203	4,944
Coyote—West	1	.....	.....	15	12,723	14,998
Dominguez	1	1	124	4	12,308	13,777
Dominguez, East	.....	.....	.....	.....	19	23
Dominguez, Southeast	.....	1	154	3	403	73
East Los Angeles	1	.....	.....	2	1,199	1,133
El Segundo	.....	.....	.....	.....	351	394
Huntington Beach	6	7	970	66	57,424	58,263
Inglewood	1	2	400	18	14,207	12,573
Lawndale	.....	.....	.....	1	720	965
Long Beach	3	4	252	27	22,825	23,463
Montebello	1	.....	.....	7	6,363	6,766
Newport	1	.....	.....	3	5,828	6,825
Playa Del Rey	.....	.....	.....	.....	1,633	1,931
Potrero	2	.....	.....	5	1,261	1,181
Richfield	1	4	263	14	6,437	6,359
Rosecrans-Athens Group	3	.....	.....	12	6,486	4,815
Santa Fe Springs	1	1	94	2	14,232	14,996
Seal Beach	.....	.....	.....	7	11,838	11,937
Torrance	.....	1	134	5	7,605	7,727
Whittier	.....	.....	.....	1	530	913
Wilmington	10	15	3,605	106	118,310	131,574
Yorba Linda	.....	.....	.....	2	205	881
Other Fields	1	2	95	10	1,576	1,678
TOTAL—Los Angeles Region	35	39	6,155	333	323,647	343,524
EXPLORATORY						
Outpost Wells	42	.....	.....	.....	.....	.....
Wildcats	15	.....	.....	.....	.....	.....
Gas Wells	3	3	.....	16	.....	.....
Abandoned Drilling Wells	.....	69	.....	402	.....	.....
TOTAL CALIFORNIA	194	211	44,480	1,671	896,169	949,594

Shell Completes Program at Ventura

Shell Oil Company recently announced the completion of a major modernization program at its Ventura Natural Gasoline Absorption Plant.

Originally built in 1926, it today is considered one of the most modern and economical plants in California for the recovery of liquid hydrocarbons. Natural gas is the energy that forces the oil out of the ground, after the driller has tapped the oil sands two miles or more beneath the earth. The plant processes the "wet gas" that is produced with the oil, and extracts and saves the desirable hydrocarbons. The residual "dry gas" is then sold to public utilities for use in homes and industry throughout Southern California.

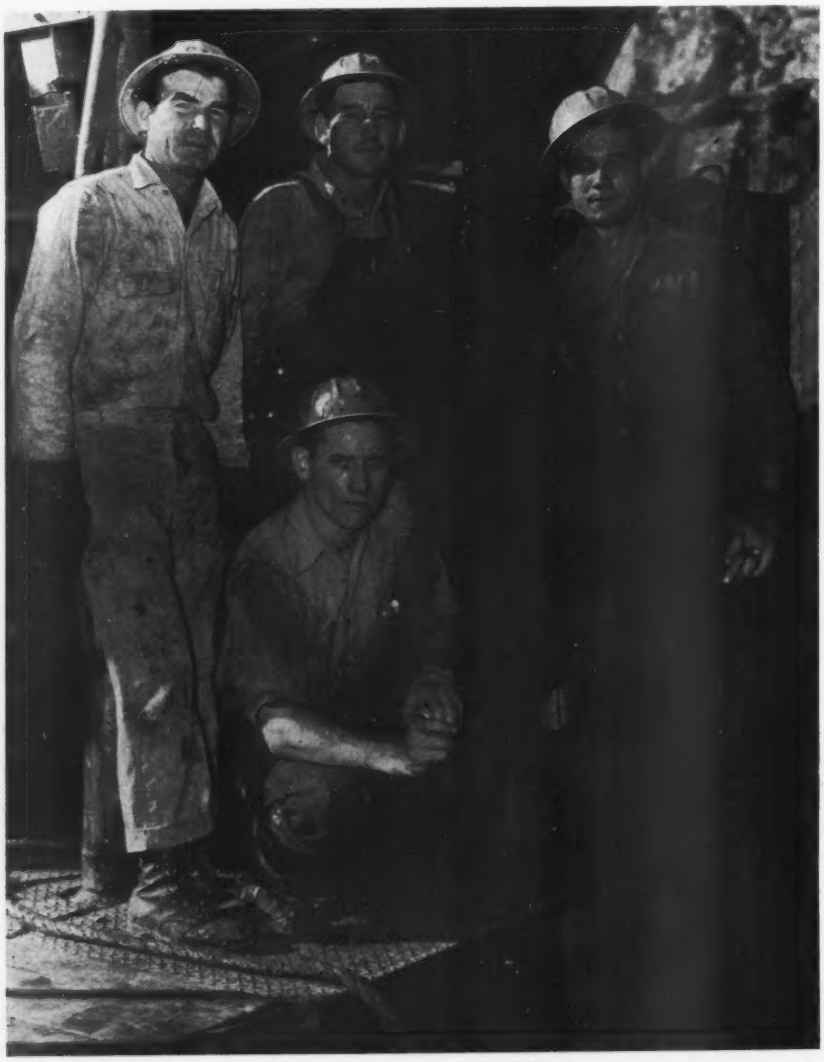
Natural gasoline absorption plants were of vital importance during the war in the recovery of those hydrocarbons which were the principal components of 100 Octane aviation gasoline. Early in the war Shell installed additional equipment at Ventura to make possible a 95 per cent recovery from the natural gas of these essential hydrocarbons.

To meet the rapidly increasing demand for propane as an all-purpose domestic fuel, Shell installed facilities in 1947 to make this important product available to the market. These additions and alterations consisted principally of storage and loading facilities to accommodate either tank truck or tank car loading. With the continued increase in propane demand, major additions were installed during 1948 which were designed to extract and save up to 85% of the potential propane in the gas. At the rate gas was processed during the last winter period, the plant was able to produce 75,000 gallons of propane per day. As with natural gas, the market for propane is a seasonal business, and the maximum rate of recovery is during the months of December, January and February.

One of the units recently installed in Shell's modernized plant is a large fractionating column, or "fat oil de-ethanizer." This 100 foot column presented a major engineering task to transport it from the fabricator to its present location on top of the Ventura Hills. It is the first such unit installed in a natural gasoline plant on the Pacific Coast, and makes possible the recovery of a high percentage of the potential propane without costly operations at sub-zero temperatures and expensive dehydration facilities.

The plant presently processes between 60 and 65 million cubic feet per day of natural "wet" gas from the Ventura oil field, from which is extracted and saved approximately 140,000 gallons per day of liquid hydrocarbons; the total gallonage depends upon seasonal demands for propane. It is interesting to note that the plant for the past 20 years has produced an average of approximately 100,000 gallons per day of liquid hydrocarbons.

Shell's Ventura plant represents an investment of over two million dollars, and is an outstanding example of the conservation of a natural resource and its conversion into useful products.



General Exploration Co.'s well Ferguson No. 6 in the Newhall-Potrero field, Rocky Mountain Drilling Co., contractors, left to right: Sam Finley, derrickman; O. D. Allen, driller; Jack Jones, lead tong; D. R. Patterson, cathead (kneeling).

Torrance Well Starts

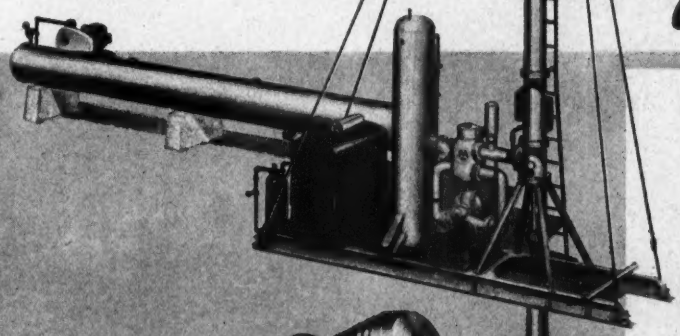
J. L. O'Donnell is starting Scott No. 2 in the Torrance field near the intersection of Western avenue and Sepulveda boulevard on Sec. 24-4s-14w.

YOU HAVE TO BE BEST TO BE FIRST AND CALIFORNIA OIL WORLD IS THE FIRST IN THE WEST.

AXELSON FIRST CHOICE *for all three*

AT THE SURFACE

The Axelson Hydraulic Long Stroke Pumping Unit produces more oil at less lifting cost because its long smooth stroke with few stroke cycles per minute combine with easy cushioned reversals to decrease stretch loss and cut sucker rod failures to an absolute minimum. Greater pumping capacity at greater depths, together with low maintenance costs and easy operation, are proving the value of the Axelson pumping unit to oil operators throughout the nation.



IN THE TUBING—Axelson duty-designed, service-proved, end-to-end normalized Sucker Rods with guaranteed minimum physical and chemical properties, backed by 56 years of manufacturing know-how, are your assurance of top performance.

AT THE PRODUCTION LEVEL—Axelson deep well plunger pumps deliver more oil at less lifting cost with less down time. There is an Axelson deep well plunger pump for every specific pumping condition.

OIL FIELD PRODUCTION EXECUTIVES AGREE—Axelson plunger pumps, sucker rods and Long Stroke Pumping Units set the quality and dependability standards for the entire petroleum producing industry. Fifty-six years of designing, manufacturing, selling and servicing deep well pumping equipment guarantees Axelson to be the top name for top production.

PRODUCTION FOREMEN AGREE—When Axelson equipment is on the lease, unquestioned reliability and peak performance are assured. Production men know Axelson deep well pumping equipment from long experience. To keep the fluid column moving with less down time, they specify Axelson.

FIELD CREWMEN AGREE that petroleum recovery equipment marked with A will produce more oil, operate longer, give less trouble, under all well and pumping conditions. Axelson maintains conveniently available stocks in most fields throughout the world to give rapid service and help to eliminate costly delays.

***WRITE TODAY** for the complete 98-page Axelson catalog giving full details on the world's finest line of deep well pumping equipment!*

AXELSON PETROLEUM PRODUCTION EQUIPMENT

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

AXELSON MANUFACTURING CO. • **PLANTS**—Los Angeles 11; St. Louis 16 • **OFFICES**—New York City 7; Tulsa 1; Buenos Aires, Argentina; Caracas, Venezuela • **DISTRIBUTORS**—Jones & Laughlin Supply Co.; Great Northern Tool & Supply Co.; Industrial Agencies, Ltd., San Fernando, Trinidad, B.W.I.; Industrias Waldrip & Campbell, Barcelona and Maracaibo, Venezuela.

What makes a Rock Bit great?

Drillers say...

Through the years, Hughes Rock Bits have been first choice with drillers the world over. Free-cutting, smooth-running action on bottom plus proven ability to "take it" means faster, more trouble-free digging with fewer round trips per hole.

From the grass roots to total depth, there's a Hughes Rock Bit designed to do the job best . . . to provide a Hughes "Engineered Solution" for any drilling formation encountered!

HUGHES TOOL COMPANY
HOUSTON, TEXAS

Standard of the Industry